

The Mining Journal.

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1567.—Vol. XXXV.

LONDON, SATURDAY, SEPTEMBER 2, 1865.

(STAMPED.....SIXPENCE.
UNSTAMPED.....FIVEPENCE.)

Mining Exchange, London.

MINING EXCHANGE, LONDON.
With a view of correcting the evil resulting from parties advertising mining shares at fixed prices and desiring to deliver the same, of which frequent complaints have been brought before the Committee, at a meeting of the members, held on Tuesday, the 18th inst., the following resolution was passed, and is in operation from this date:—
That no MINERS of the MINING EXCHANGE shall be allowed, directly or indirectly, to advertise shares at fixed prices, under pain of suspension.
Mining Exchange, London, July 18, 1865. W. E. JOHNSON, Sec.

MR. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 22 years.)
MR. CROFTS offers the FOLLOWING SHARES FOR SALE and IMMEDIATE DELIVERY, all calls paid, net cash:—25 Rosewarne Consols, 13s. 6d.; 65 Bedol-Aur, 10s. 6d.; 10 West Caradon, 11s. 11d.; 8 Great Laxey (dividend 10s., bonus 4s., Sept. 9, 1865), 22s. 11d.; 10 Clifton Amalgamated, 22s. 11d.; 20 Chiverton, 22s. 11d.; 10 East Caradon, 11s. 6d.; 20 North Dolcoath, 13s. 6d.; 20 Rosewarne, 13s. 6d.; 200 Prince of Wales, 2s. 9d.; 15 Wheel Harriet, 5s. 3d.; 10 Lady Bertha, 11s. 6d.; 200 North Basset, 19s. 3d.; 100 Wheel Lovell (see Mr. Crofts' letter, p. 58); 5 Wheel Margaret, 24s. 11d.; 25 Kelly Bray, 5s. 9d.; 50 Ludcott, 10s. 6d.; 100 Dale, 5s. 3d. A further list on application, or enquiries answered as to particulars.
* An advanced price is obtainable for shares in CENTRAL MINERS.

MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.
JAMES LANE has FOR SALE at net prices:—2 Basset and Grylls, 23s. 11d.; 20 Bette Hill, 10s. 6d.; 20 Carn Camborne, 22s. 11d.; 10 Chiverton, 22s. 11d.; 20 Dale, 5s. 3d.; 5 East Caradon, 11s. 6d.; 10 East Carn Brea, 20s. 11d.; 30 East Rosewarne, 13s. 6d.; 10 Frank Mills, 23s. 11d.; 25 Frontino and Bolivia, 23s. 11d.; 40 Great Laxey, 23s. 11d.; 20 Great North Laxey, 23s. 11d.; 5 Great Vor, 23s. 11d.; 50 Grylls Wheel Florence, 5s. 3d.; 20 Hellenbeagle, 23s. 11d.; 15 Ludcott, 10s. 6d.; 50 Lady Bertha, 11s. 6d.; 8 Long Rake, 10s. 6d.; 20 Marks Valley, 24s. 11d.; 50 New Martha, 17s. 6d.; 10 North Trekerby, 23s. 11d.; 10 North Jane, 7s. 6d.; 10 Port Phillip, 25s. 6d.; 50 Prince of Wales, 2s. 9d.; 20 Rosewarne Consols, 13s. 6d.; 10 Wheel Seton, 21s. 11d.; 25 South Laxey, 23s. 11d.; 80 Sortridge, 2s. 9d.; 20 Tolden, 10s. 6d.; 10 Trencroft, 23s. 11d.

MR. WILLIAM LEEAN, (Member of the Mining Exchange), has FOR SALE the FOLLOWING SHARES:—
20 Bedol-Aur, 10s. 6d.; 20 Bette Hill, 10s. 6d.; 20 Carn Camborne, 22s. 11d.; 10 Chiverton, 22s. 11d.; 20 Dale, 5s. 3d.; 5 East Caradon, 11s. 6d.; 10 East Carn Brea, 20s. 11d.; 30 East Rosewarne, 13s. 6d.; 10 Frank Mills, 23s. 11d.; 25 Frontino and Bolivia, 23s. 11d.; 40 Great Laxey, 23s. 11d.; 20 Great North Laxey, 23s. 11d.; 5 Great Vor, 23s. 11d.; 50 Grylls Wheel Florence, 5s. 3d.; 20 Hellenbeagle, 23s. 11d.; 15 Ludcott, 10s. 6d.; 50 Lady Bertha, 11s. 6d.; 8 Long Rake, 10s. 6d.; 20 Marks Valley, 24s. 11d.; 50 New Martha, 17s. 6d.; 10 North Trekerby, 23s. 11d.; 10 North Jane, 7s. 6d.; 10 Port Phillip, 25s. 6d.; 50 Prince of Wales, 2s. 9d.; 20 Rosewarne Consols, 13s. 6d.; 10 Wheel Seton, 21s. 11d.; 25 South Laxey, 23s. 11d.; 80 Sortridge, 2s. 9d.; 20 Tolden, 10s. 6d.; 10 Trencroft, 23s. 11d.

WANTED TO PURCHASE:—Great Laxey (old and new shares), Reine Laxey, North Basset, Chiverton, West Chiverton, and Great North Laxey.
MR. LEEAN BUTTS and SELLS all descriptions of ENGLISH and FOREIGN STOCKS and SHARES, INSPECTS MINES, and TRANSACTS all the usual BUSINESS of a STOCK and SHAREDEALER, and parties may rely upon him for sound advice and punctuality in all his engagements.
MR. LEEAN refers his correspondents to his remarks in p. 568 of this day's Journal.
R. LEEAN, SPECIALLY RECOMMENDED, the immediate purchase of Great Laxey, Reine Laxey, Rosewarne Consols, Mandlin, Great South Chiverton, West Chiverton, East Chiverton, North Miners, North Basset, and Snaefell.
Bankers: Messrs. Roberts, Lubbock, and Co.
Office, 11, Royal Exchange, London, E.C.

MR. WILLIAM LEEAN'S STOCK, SHARE, AND FINANCE REGISTER (August number was published on Tuesday, the 26th ult.), should be consulted by all who wish to make safe and profitable investments, giving from 10 to 15 per cent., or to review the state of the market for the preceding 30 days. Single copies, 6d. each; annual subscription, 5s. Published monthly, 11, Royal Exchange, E.C.

NOTICE OF REMOVAL.
MR. J. P. ENDEAN, MINE AND GENERAL SHARE DEALER, has REMOVED from 1, Crown-court, Old Broad-street, to more extensive and convenient offices, at 6, FINCHBURY CHAMBERS, LONDON WALL, opposite Great Winchester-street.—June 30, 1865.

MR. THOS. THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.
MR. THOMPSON being intimately acquainted with the LAXEY DISTRICT, in the Isle of Man, and its various mines, and continually receiving private and valuable information respecting them, will be happy to communicate with anyone thinking of making an investment in the mines of this district.

MR. G. D. SANDY, SHAREDEALER, No. 29, THREADNEEDLE STREET, LONDON, E.C. (Member of the Mining Exchange).
MR. SANDY specially recommends Rosewarne United, East Vor, Lady Bertha, West Caradon, Kelly Bray, North Trekerby, North Dolcoath, Godolphin Hill, and West Great Laxey, as an early advance in the price is certain.
Correct Daily Price List issued gratis on application.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 11 years), has FOR SALE the FOLLOWING SHARES, at net prices:—
20 Bedol-Aur, 10s. 6d.; 20 Bette Hill, 10s. 6d.; 20 Carn Camborne, 22s. 11d.; 10 Chiverton, 22s. 11d.; 20 Dale, 5s. 3d.; 5 East Caradon, 11s. 6d.; 10 East Carn Brea, 20s. 11d.; 30 East Rosewarne, 13s. 6d.; 10 Frank Mills, 23s. 11d.; 25 Frontino and Bolivia, 23s. 11d.; 40 Great Laxey, 23s. 11d.; 20 Great North Laxey, 23s. 11d.; 5 Great Vor, 23s. 11d.; 50 Grylls Wheel Florence, 5s. 3d.; 20 Hellenbeagle, 23s. 11d.; 15 Ludcott, 10s. 6d.; 50 Lady Bertha, 11s. 6d.; 8 Long Rake, 10s. 6d.; 20 Marks Valley, 24s. 11d.; 50 New Martha, 17s. 6d.; 10 North Trekerby, 23s. 11d.; 10 North Jane, 7s. 6d.; 10 Port Phillip, 25s. 6d.; 50 Prince of Wales, 2s. 9d.; 20 Rosewarne Consols, 13s. 6d.; 10 Wheel Seton, 21s. 11d.; 25 South Laxey, 23s. 11d.; 80 Sortridge, 2s. 9d.; 20 Tolden, 10s. 6d.; 10 Trencroft, 23s. 11d.

JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C., is a BUYER of—
Great Laxey, North Basset, Chiverton, West Chiverton, and Great North Laxey.
Wheal Harriet, North Trekerby, North Dolcoath, Godolphin Hill, and West Great Laxey.
Wheal Seton, North Trekerby, North Dolcoath, Godolphin Hill, and West Great Laxey.
Wheal Harriet, North Trekerby, North Dolcoath, Godolphin Hill, and West Great Laxey.

MATTHEW GREENE, STOCK AND SHAREDEALER,
5, GRACECHURCH STREET, LONDON, has the FOLLOWING SHARES FOR SALE:—
20 Bedol-Aur, 10s. 6d.; 20 Bette Hill, 10s. 6d.; 20 Carn Camborne, 22s. 11d.; 10 Chiverton, 22s. 11d.; 20 Dale, 5s. 3d.; 5 East Caradon, 11s. 6d.; 10 East Carn Brea, 20s. 11d.; 30 East Rosewarne, 13s. 6d.; 10 Frank Mills, 23s. 11d.; 25 Frontino and Bolivia, 23s. 11d.; 40 Great Laxey, 23s. 11d.; 20 Great North Laxey, 23s. 11d.; 5 Great Vor, 23s. 11d.; 50 Grylls Wheel Florence, 5s. 3d.; 20 Hellenbeagle, 23s. 11d.; 15 Ludcott, 10s. 6d.; 50 Lady Bertha, 11s. 6d.; 8 Long Rake, 10s. 6d.; 20 Marks Valley, 24s. 11d.; 50 New Martha, 17s. 6d.; 10 North Trekerby, 23s. 11d.; 10 North Jane, 7s. 6d.; 10 Port Phillip, 25s. 6d.; 50 Prince of Wales, 2s. 9d.; 20 Rosewarne Consols, 13s. 6d.; 10 Wheel Seton, 21s. 11d.; 25 South Laxey, 23s. 11d.; 80 Sortridge, 2s. 9d.; 20 Tolden, 10s. 6d.; 10 Trencroft, 23s. 11d.

MR. GEORGE BUDGE, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 18 years), has FOR SALE:—
20 Bedol-Aur, 10s. 6d.; 20 Bette Hill, 10s. 6d.; 20 Carn Camborne, 22s. 11d.; 10 Chiverton, 22s. 11d.; 20 Dale, 5s. 3d.; 5 East Caradon, 11s. 6d.; 10 East Carn Brea, 20s. 11d.; 30 East Rosewarne, 13s. 6d.; 10 Frank Mills, 23s. 11d.; 25 Frontino and Bolivia, 23s. 11d.; 40 Great Laxey, 23s. 11d.; 20 Great North Laxey, 23s. 11d.; 5 Great Vor, 23s. 11d.; 50 Grylls Wheel Florence, 5s. 3d.; 20 Hellenbeagle, 23s. 11d.; 15 Ludcott, 10s. 6d.; 50 Lady Bertha, 11s. 6d.; 8 Long Rake, 10s. 6d.; 20 Marks Valley, 24s. 11d.; 50 New Martha, 17s. 6d.; 10 North Trekerby, 23s. 11d.; 10 North Jane, 7s. 6d.; 10 Port Phillip, 25s. 6d.; 50 Prince of Wales, 2s. 9d.; 20 Rosewarne Consols, 13s. 6d.; 10 Wheel Seton, 21s. 11d.; 25 South Laxey, 23s. 11d.; 80 Sortridge, 2s. 9d.; 20 Tolden, 10s. 6d.; 10 Trencroft, 23s. 11d.

STOCK EXCHANGE SECURITIES.

Railways. Banks. English Funds.
Financial. Foreign Funds. Discount.
Steamship. Loan. Docks.
Ironworks. Gas. Water Works.
Insurance. Telegraph. Htcel.
Marine Insurance. Land. Irrigation.
Foreign Mines. Cornish Mines. Devon's Mines.
And other public companies.

MR. PETER WATSON, STOCK AND SHAREDEALER,
begs to state that every information respecting any of the above companies may be had on personal application, or by letter, as to PURCHASES and SALES, with advice as to the most desirable investments.
From the close proximity of his offices to the Stock Exchange, and also the Mining Exchange, he is enabled to act with promptitude on all orders entrusted to him in the PURCHASE or SALE of every description of stocks or shares, at net prices for cash or fortnightly settlements.
TELEGRAPHIC MESSAGES of customers to BUY or SELL in any of the above companies punctually attended to, at net prices for cash or half-monthly settlements, at the closest possible market prices of the day.
Twenty years' experience.
(Two in Cornhill and Eighteen in London.)

Bankers: The Union Bank of London, and the Alliance Bank.
The present is an unusually favourable period for the investment of capital.
A SELECTED LIST of Railways, Banks, Financial, Foreign Funds, Steamships, Foreign and Cornish and Devon Mines, &c., sent on application, with special recommendations as to investments, &c., on the distinct understanding that any business resulting through his information or advice may be done through him.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C.

MR. A. G. MCNEILL, STOCK AND SHAREDEALER,
48, THREADNEEDLE STREET, LONDON, E.C.
Bankers: Alliance Bank.

JOSEPH J. REYNOLDS, Junr.,
18, UNION COURT, OLD BROAD STREET, LONDON, E.C.

WILLIAM WARD,
29, THREADNEEDLE STREET, LONDON, E.C.

HARRIS AND CO., STOCK AND SHAREBROKERS,
AND FINANCIAL AGENTS,
15, GEORGE STREET, MANSION HOUSE, LONDON, E.C.

JOHN GREEN, MINING OFFICES,
9, GRACECHURCH STREET, LONDON, E.C.
ESTABLISHED SIX YEARS.

WILLIAM SEWARD,
19, THROGMORTON STREET, LONDON, E.C.

SHARES WANTED IN THE FOLLOWING MINES.
State name and price:—
*Trencroft.
*Kitty (Island).
*Rosewarne United.
*South Frances.
H. B. RYE.
Mining Offices, 77, Old Broad-street, and Mining Exchange, London, Sept. 1, 1865.

EDWARD COOKE, SHAREDEALER,
2, CROWN CHAMBERS, THREADNEEDLE STREET, AND MINING EXCHANGE, LONDON, E.C.
EDWARD COOKE deals at close prices in railway, bank, and other securities usually dealt in on the Stock Exchange, and satisfactory references given in any town in the United Kingdom if required.
Sept. 1, 1865. Bankers: Alliance Bank, Lothbury.

NOTICE OF REMOVAL.
MESSRS. WARD AND JACKMAN, STOCK AND SHAREDEALERS, have REMOVED from 2, Adam's-court to No. 1, CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Members of the Mining Exchange.—Bankers: London and Westminster, Lothbury.

MR. E. GOMPERTS, MINING OFFICES,
2, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
BUSINESS TRANSACTED IN BRITISH AND FOREIGN STOCKS AND SHARES.
Terms, 1 1/2 per cent.
Bankers: London and Westminster Bank.

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., has BUSINESS to TRANSACT in the FOLLOWING SHARES, at close market prices:—
Bedford United, Great Wheel Vor, North Pool.
Chiverton, Great North Downs, North Trekerby.
Chiverton Moor, Great South Chiverton, North Basset.
Clifton Amalgamated, Great Wheel Harriet, Rosewarne United.
East Russell, Great South Toigus, Tincroft.
East Rosewarne, Great Laxey, Wheel Seton.
East Gannelslake, Hellenbeagle, Wheel Edward.
East Carn Brea, Hingston Down, Wheel Greenville.
East Caradon, Kelly Bray, Wheel Crebber.
East Grenville, Lady Bertha, Wheel Grylls.
East Lovell, Frank Mills, West Caradon.
Garrison United, North Downs, West Chiverton.
Great Laxey, North Trekerby, Wheel Rose.

T. ROSEWARNE can recommend four mines certain to pay cent. per cent. in a few months.
T. ROSEWARNE should be consulted immediately by parties about to invest.
Sept. 1, 1865. Bankers: Bank of London.

GREAT WHEEL VOR.—The present state of the market for these shares proves the soundness of my advice (given some months since) to buy at 230. My Circular issued last June is still in print, and can be obtained from me on payment of 2s. 6d. per copy; it will be found particularly useful to the holders of the stock.
JNO. B. REYNOLDS.
2, Crown-court, Old Broad-street, London, E.C., Sept. 2, 1865.

SOUTH CALLINGTON.—The attention of the public is respectfully called to the merits of this property, and I strongly advise the purchase of the stock, feeling assured that the mine gives promise of great success. The fullest information on every point can be obtained on application to me. No title should be lost in making the investment. (See report.) JNO. B. REYNOLDS.
2, Crown-court, Old Broad-street, London, E.C., Sept. 2, 1865.

MR. J. B. REYNOLDS, 3, CROWN COURT, OLD BROAD STREET, LONDON, E.C., continues to transact business in mining shares and other securities dealt in on the Stock Exchange, and considers every communication addressed to him as being in the strictest confidence. He advises as to what should be bought, sold, and avoided. He requests his clients to be as definite as possible in their communications. MR. REYNOLDS has business in—
Chiverton Moor, East Caradon, Rosewarne United.
East Lovell, Great Vor, South Callington.
East Chio, Great North Laxey, West Great Work.
East Grylls, North Dolcoath, Wheel Grylls.
Sept. 2, 1865. &c.

MR. GEORGE BATTERS strongly recommends his friends to buy West Chiverton, Chiverton, Herodfoot, South Caradon, Devon Great Consols, Great Wheel Vor, Wentworth Consols, and Sibley Wheel Metal for investment. These shares will pay good interest for money at present quotations.
Advertisements have recently been inserted in the columns of the Mining Journal by dealers who, having sold shares for forward delivery, endeavour to frighten timid holders in order to possess themselves of their shares to fulfil their contracts; this system has been adopted particularly against Great Wheel Vor, West Chiverton, and Chiverton shares, and I caution my friends against parting with their property, or giving credence to the unfounded assertions of interested parties.—78, Old Broad-street, London, E.C.

BRITISH AND FOREIGN INVESTMENT.
MR. THOMAS SPARGO, 224, and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., TRANSACTS EVERY DESCRIPTION OF BUSINESS in the PURCHASE and SALE of SHARES in BANKS, CANALS, MINES, RAILWAYS, BRIDGES, INSURANCES, AND ALL OTHER DESCRIPTIONS OF BRITISH AND FOREIGN STOCK.

MR. SPARGO has 30 years' experience of mining, ten of which he was engaged in practical mining, and ten years he has transacted business in mining shares and stock, at 224 and 225, Gresham House, Old Broad-street, City, E.C.
Bankers: Bank of London.

MR. T. P. THOMAS, MINING AGENT AND AUCTIONEER,
6, NEW BROAD STREET, LONDON.

VALUABLE DIVIDEND AND OTHER SHARES FOR SALE, BY PUBLIC AUCTION.

MR. T. P. THOMAS WILL SELL, BY PUBLIC AUCTION,
at Garraway's Coffee-house, Change-alley, Cornhill, London, on Thursday, the 7th day of September next, at Two o'clock, the following VALUABLE SHARES:—
1000 St. Bride Slate and Slab Company (Limited, £2 each), fully paid.
48 British and Foreign Mining and Financial Association (Limited).
50 Worthing Copper Mining Company, Australia (Limited, £1 fully paid).
10 Fortune Copper, West Australia (Limited, fully paid).
100 Ramsay Lead Mining and Smelting Company, Canada (Limited, fully paid).
15 Crozier Valley and Port Madoc Slate Company (Limited, £3 paid).
55 Havan Silver-Lead Mining Company (Limited, fully paid).
100 West Clifton United Mining Company (Limited, £3 paid).
200 Great So. Chiverton. 10 Bryn Gwlog. 10 Rosewall Hill and Ransom United.
15 Cuddra. 50 Bedol-Aur. 10 North Downs.
20 West Grylls. 50 Godolphin Hill. 10 North Trekerby.
10 East Providence. 2 Miners (paying regular dividends). 20 North Trekerby.
8 Crown Consols. 200 Miners Boudry (paying dividends). 50 Drake Walls.
24 Wheel Harriet. 60 Wheel Greenville. 20 Cranver and Abraham.
50 Trewhatha. 60 South Grenville. 10 Botelet.
50 Wheel Pollard. 40 East Grenville. 40 Scot. Aust. (Limited).
3 South Basset. 20 East Rosewarne. 25 Cen. Miners (Limited).
1 Granbler. 10 Rosewarne United.
10 Rosewarne United. 20 East Rosewarne. 25 Cen. Miners (Limited).
Parties desirous of putting-up shares at this sale are particularly requested to send their instructions not later than Thursday, the 31st inst., in order that they may be advertised and inserted in the catalogue.

THE ALLY-CRIB LEAD MINE, CARDIGANSHIRE.

MR. T. P. THOMAS has been favoured with instructions by the Liquidator to SELL BY PUBLIC AUCTION, at Garraway's Coffee-house, Change-alley, Cornhill, London, on Tuesday, the 19th day of September next, at One o'clock, One Lot, and subject to the conditions which will be produced at the sale, all that VALUABLE LEAD MINE and SETT, known as the ALLY-CRIB MINE, situate at Tal-y-bont, Cardiganshire, seven miles from Aberystwith, together with the BUILDINGS, MACHINERY, &c., forming the whole of the plant and property of the Ally-Crib Mining Company (Limited) in, upon, and belonging to the said mine, comprising amongst other things a powerful WATER WHEEL, 29 ft. diameter, with 5-hp. breast, dressing machinery, and the necessary means and appliances for immediately continuing the works.—Full particulars and conditions of sale may be had on application to the Liquidator, Mr. TADDORE PAUL, Aberystwith, or to the Auctioneer, 6 New Broad-street, London.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, 6, NEW BROAD STREET, LONDON, E.C.

GODOLPHIN HILL.—MR. T. E. W. THOMAS has interested himself in the progress of the development of this mine, and from personal inspections that he has made during the last two years, can, with great confidence and much pleasure, recommend the shares to the investing public on the merits of the property as it now is, but mostly upon the prospects for the future, wherein he anticipates a quick increase in the profits of what is even now a remunerative mine.
MR. THOMAS, in recommending this mine as a well-managed and good Cornish mining property, desires those who might contemplate a large investment to have the mine inspected by a practical mine manager—the services of any of whom can be had at from two to four guineas—before doing so.
To intending investors, MR. THOMAS will supply copies of reports and all further and minute particulars upon requirement.
MR. THOMAS daily transacts business in the shares, the present price being 25s. to 30s. 6, New Broad-street, London, September 1, 1865.

MR. FRANCIS G. LANE, No. 2, ROYAL EXCHANGE,
and one of the first subscribers to the Mining Exchange, having every confidence that the public appreciate the system of advertising prices to the shares they have for sale, on principle objected to the resolution passed at a late meeting of the members of the Mining Exchange. Should, however, the same be confirmed, I appeal to my clients for a continuance of that support which they have hitherto favoured me with, and for which I have no reason, and I believe they also, to regret, and if continued I shall tender my resignation as a member of the Exchange, and advertise shares as before at fixed prices, trusting that my connection of over 15 years with the management of mines and the market, my large dealings and extensive connection, also the regularity in which all engagements have been carried out, both with the public and members of the Exchange, will be the means of securing my share of public support. My office being in the most central part of the City, is used as a register for all stocks and shares that for the moment may not be immediately marketable. Sellers of such stock by that means frequently meet with a ready sale, and buyers effect a great saving in commission and amount paid for stock.
The following shares, being a portion of the lot advertised in the Journal of the 15th July, are still for sale at prices therein quoted, free of commission:—
10 Bryn Gwlog. 55 New Martha. 50 Snaefell (£1 fully paid).
20 Bedford United. 20 North Miners, bearing 40 St. Day United.
40 Carn Camborne. 20 per cent. preferential dividend (15s. 25 St. Just United.
50 Cape Corn. (35s. paid). 50 West Wheel Vor.
50 Drake Walls. 50 Wheel Crebber.
25 East Carn Brea. 20 North Trekerby. 50 North Trekerby.
10 Great Wheel Vor. 20 North Trekerby. 50 North Trekerby.
20 Grylls Florence. 50 North Trekerby. 50 North Trekerby.
Advances made on mining shares.
Parties wishing to dispose of their interest in mines will do well to communicate with the advertiser, who is at all times in a position to purchase for cash.
Parties of respectability can have transfers registered into their names previous to payment.
Bankers: London and County Bank.

JAMES HUME, 74, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange).
Bankers: The London Joint-Stock Bank.

MR. WALTER TREGELLAS, 3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C., continues to deal at close market prices in all good sound dividend and progressive mines.
MR. TREGELLAS has FOR SALE, for immediate cash:—10 Princess of Wales Slate Company (£3 paid); 20 Prince of Wales (£4 paid); 5 The London, Limited (£7 paid); 20 Inns of Court Hotel (£7 paid).

WILLIAM BARTLETT, No. 2, BUCKLERSBURY, MINING EXCHANGE, LONDON, E.C.
SHARES FOR SALE at fair market prices, and free of commission:—50 North Trekerby, 5 South Croft, 2 Mary Ann, 10 Par Consols, 6 Chiverton, 10 East Russell, 20 East Providence, 10 Clifton, and 10 South Laxey.
WANTED TO PURCHASE:—50 North Basset, and 20 East Lovell.
MR. BARTLETT, during the next fortnight, will visit the principal mines of Devon and Cornwall, and on his return will be happy to forward a list of those which he then considers most desirable for investment.
Business done for cash or for the fortnightly settlement.
Bankers: Alliance Bank.

GEORGE RICE, SHAREDEALER, 5, COWPER'S COURT, BIRCHIN LANE, LONDON (23 years' experience), Member of the Mining Exchange, DEALS in MINING SHARES at close prices, as BUYER or SELLER.

Latest prices. Latest prices.
Chiverton £ 8 - 8 1/2 Lady Bertha 10s. - 11s.
East Carn Brea 5 1/2 - 6 Marks Valley 3 1/2 - 4
East Grenville 2 1/2 - 3 North Trekerby 2 - 2 1/2
East Caradon 12 - 13 South Croft 3 1/2 - 4
East Basset 14 - 15 West Wheel Vor 2 - 2 1/2
East Wheel Lovell 15 - 16 West Chiverton 70 - 72
Great Wheel Vor 35 - 36 Wheel Clifton 21 - 22
Hingston 4 - 4 1/2 Wheel Crebber 30s. - 32s.
George Rice having recently returned from the mining districts of Cornwall and Devon, is well prepared to advise his clients what shares to buy or sell.
Money advanced on mining shares.
Sept. 1, 1865. Bankers: Bank of London.

MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C., recommends for immediate purchase Chiverton shares. Being now at a very low price, a great rise may immediately be expected. Full particulars on application.

THE INVESTMENT, LOAN, AND FINANCE AGENCY
undertakes the sale and purchase of Public Securities, and affords reliable information to Capitalists who seek permanent Investments, or the temporary employment of money, to the safest and best advantage.
The Loan and Finance Department includes Money Agency generally, Loans, Deposits, &c., and advances are negotiated on Public Securities having a market value.
The same uniform system of strict attention is paid to transactions of small as well as of large amounts, the object being to embrace the business of every description of investors.
Office, 13, Clement's-lane Lombard-street, London, E.C.

THE MINES OF CORNWALL AND DEVON: STATISTICS AND OBSERVATIONS.

By THOMAS SPARGO, Mining Engineer, Stock and Sharebroker, 234 and 235, Gresham House, Old Broad-street, London, E.C.

It contains the following particulars, viz.:—The geological position, present prospects, names of purser, manager, and secretary, with statement of the annual returns of each mine during the last three years, and of total dividends paid to the present time. The work is illustrated by a Map of Cornwall and Devonshire; Geological District Maps, divided into eight sections, in which are shown the boundary lines of each parish, height of hills, sources of rivers, &c.; Maps of the St. Just, St. Ives, Marazion, Helston, Gwinnar, Chiverton, Bodmin, Liskeard, Devon Great Consols, Aabburton, and Exmouth mining districts, showing boundary lines of each property, with the lodes, &c., traversing them. It also contains Transverse and Longitudinal Sections of Dolcoath Mine (kindly supplied by Capt. Charles Thomas); Section of the Workings in Botallack Mine (supplied by the manager, S. H. James, Esq.); Geological Map of the Fowey Consols District (supplied by Major Davis, R.M.); Longitudinal Section of Great Wheal Vor (Wheal Metal lode supplied by George Noakes, Esq.); Historical Account of the Devon Great Consols (supplied by the secretary, A. Allen, Esq.); and of all the principal mines in the two counties, including the following—

Abraham Consols	Mellon	Trencon
Alfred Consols	Mineral Bottom	Trerew Wheal Rose
Ballicawden	Mineral Court	Trevaun & Tretharpp
Balmynear	Nancegollan	Trekerby
Baincon	Nangiles	Trethell and West Tre-
Basset and Grylls	New Barra Barra	thellian
Billa	New Chiverton	Trevel and Messer
Binner Downs	New Clifford	Trevaunance
Bodmin Consols	New Cornish	Trevaun & Tremenhoe
Boscawell	New Crow Hill	Trevoile
Boscawen	New Hender	Trewane
Bosconan	New Lovell	Trewor
Boscundie	New Pembroke	Trumpet Consols
Bosworthen	New Rosewarne	Trumpet United
Boswell and Wh. Castle	New South Caradon	Tyringham Consols
Botallack	New Trevel	Tywarthall
Botet	New Trevenn	Wendron Consols
Brewer	New Vor and Metal Utd.	Wendron United
Budnick Consols	New Wandron	Wentworth Consols
Butler and Basset Utd.	New Wheal Frances	West Alfred
Calstock Consols	New Wheal Martha	West Alfred Consols
Calvaden	New Wheal Rose	West Basset
Camborne Consols	New Wheal Seton	West Caradon
Camborne Veau	New Wheal Vaddon	West Chiverton
Cape Cornwall	Noble Dale	West Clifford
Caradon Consols	North Basset	West Condurrow
Caradon & Phoenix Cons.	North Beller	West Dolcoath
Caradon Hill	North Chiverton	West Drake Walls
Caradon Vale	North Consols	West Fowey Consols
Caradon United	North Dolcoath	West Frances
Carthana	North Dole	West Great Work
Cardew Consols	North Downs	West Grylls
Cargill	North Frances	West Lovell
Carharrack	North Gwinnar	West Margaret
Carlen Wheal Vor	North Grylls	West Martha
Carn Brea	North Hellenbagle	West Par Consols
Carn Camborne	North Hellenbagle	West Phoenix
Carnyorth	North Hellenbagle	West Providence
Carrock Downs	North Jane	West Rosewarne
Carvath United	North Leasure	West Seton
Caslee	North Laddock	West Sharp Tor
Cassellides, The	North Phoenix	West Stray Park
Cathedral	North Prospekt	West Towan
Charlestown United	North Rosewarne	West Treasury
Charlotte United	North Roak	West Trevaun
Chiverton Moor	North Shepherds	West Trevel
Clifford Amalgamated	North Trevaun	West Trevel
Clijah and Wentworth	North Trekerby	West Wheal Damsel
Clovenhoe Wood	North Wheal Bury	West Wheal Edward
Cook's Kitchen	North Wheal Croft	West Wheal Jane
Coombe	No. Wh. Metal (Brea)	West Wheal Kitty
Condurrow	No. Wh. Metal (Sithney)	West Wheal Tolgus
Copper Hill	North Wheal Seton	West Wheal Vor
Cornelia	North Wrey Consols	West Wheal Vor
Cornelie	Okel Tor	Wheal Agar
Cradock Moor	Old Gunislake	Wheal Albert
Craze	Par and St. Blazey Cons.	Wheal Anna
Creegbarrow & Penkivel	Par Consols	Wheal Annie
Creever & Wh. Abraham	Penryn and Penryn	Wheal Arthur
Cridell	Penryn Wheal Metal	Wheal Bal
Crown Consols	Penryn Wheal Metal	Wheal Basset
Crown and Wendron	Penryn Wheal Metal	Wheal Beauchamp
Cuddra	Penryn Wheal Metal	Wheal Blencowe
Devon Great Consols	Penryn Wheal Metal	Wheal Buller
Devon Great Maria	Penryn Wheal Metal	Wheal Caroline
Ding Dong	Penryn Wheal Metal	Wheal Chance
Dolcoath	Penryn Wheal Metal	Wheal Chiverton
Drake Walls	Penryn Wheal Metal	Wheal Clowance
Duke of Cornwall	Penryn Wheal Metal	Wheal Croft
East Alfred Consols	Penryn Wheal Metal	Wheal Cupid
East Budnick and Mount	Penryn Wheal Metal	Wheal Curtis
East Caradon	Penryn Wheal Metal	Wheal Edward
East Carn Brea	Penryn Wheal Metal	Wheal Eliza
East Chiverton	Penryn Wheal Metal	Wheal Emily Henrietta
East Cronis and So. Par	Penryn Wheal Metal	Wheal Falmouth & Sperris
East Dore	Penryn Wheal Metal	Wheal Friendship
East Fortuna	Penryn Wheal Metal	Wheal Glyn
East Great Work	Penryn Wheal Metal	Wheal Golding
East Grylls	Penryn Wheal Metal	Wheal Gorland
East Gunislake and Sou.	Penryn Wheal Metal	Wheal Grenville
Hedford	Penryn Wheal Metal	Wheal Grylls
East Margaret	Penryn Wheal Metal	Wheal Guskus
East Phoenix	Penryn Wheal Metal	Wheal Harmony
East Penryn	Penryn Wheal Metal	Wheal Harriet
East Penryn	Penryn Wheal Metal	Wheal Hartley
East Pool	Penryn Wheal Metal	Wheal Heale
East Providence	Penryn Wheal Metal	Wheal Hender
East Rosewarne	Penryn Wheal Metal	Wheal Hope
East St. Just United	Penryn Wheal Metal	Wheal Jane
East Trevaun	Penryn Wheal Metal	Wheal Jewell
East Trekerby	Penryn Wheal Metal	Wheal Kekewich
East Virgin	Penryn Wheal Metal	Wheal Kitty (St. Agnes)
East Wheal Abraham	Penryn Wheal Metal	Wheal Kitty (Lant)
East Wheal Agar	Penryn Wheal Metal	Wheal Lant
East Wheal Basset	Penryn Wheal Metal	Wheal Liberty
East Wheal Buller	Penryn Wheal Metal	Wheal Louisa
East Wheal Damsel	Penryn Wheal Metal	Wheal Lovell
East Wheal Elean	Penryn Wheal Metal	Wheal Maiden
East Wheal Falmouth	Penryn Wheal Metal	Wheal Margaret
East Wheal Florence	Penryn Wheal Metal	Wheal Margery
East Wheal Grenville	Penryn Wheal Metal	Wheal Mary Ann
East Wheal Jane	Penryn Wheal Metal	Wheal Mary (Perranab.)
East Wheal Leasure	Penryn Wheal Metal	Wheal Mary (Redruth)
East Wheal Lovell	Penryn Wheal Metal	Wheal Mary Consols
East Wheal Music	Penryn Wheal Metal	Wheal Mexico
East Wheal Damsel	Penryn Wheal Metal	Wheal Music
East Wheal Seton	Penryn Wheal Metal	Wheal Nelson
East Wheal Tolgus	Penryn Wheal Metal	Wheal Neptune
East Wheal Vor	Penryn Wheal Metal	Wheal Norris
Fowey Consols	Penryn Wheal Metal	Wheal Ocean
Garland United	Penryn Wheal Metal	Wheal Owles
Gernick	Penryn Wheal Metal	Wheal Par
Gilmar	Penryn Wheal Metal	Wheal Penrose
Glasgow Caradon Consols	Penryn Wheal Metal	Wheal Pink and Clinton
Godolphin	Penryn Wheal Metal	Wheal Polharmon
Gonemans	Penryn Wheal Metal	Wheal Pollard
Gonzen	Penryn Wheal Metal	Wheal Polmear
Goshen	Penryn Wheal Metal	Wheal Prosper
Grambler & St. Aubyn	Penryn Wheal Metal	Wheal Prospekt
Great Brigant	Penryn Wheal Metal	Wheal Prudence
Great Caradon	Penryn Wheal Metal	Wheal Ramoth
Great Dowgan	Penryn Wheal Metal	Wheal Reen
Great East Lovell	Penryn Wheal Metal	Wheal Reeth
Great North Downs	Penryn Wheal Metal	Wheal Rose (Sithney)
Great North Tolgus	Penryn Wheal Metal	Wheal Rose (St. Agnes)
Great Retallack	Penryn Wheal Metal	Wheal Seton
Great South Chiverton	Penryn Wheal Metal	Wheal Seton
Great Wheal Alfred	Penryn Wheal Metal	Wheal Sliely
Great Wheal Badden	Penryn Wheal Metal	Wheal Sparrow
Great Wheal Basset	Penryn Wheal Metal	Wheal Speedwell (St. Agnes)
Great Wheal Bury	Penryn Wheal Metal	Wheal Speedwell (Brea)
Great Wheal Fortune	Penryn Wheal Metal	Wheal Spintar
Great Wheal Grylls	Penryn Wheal Metal	Wheal Squire (Gwennap)
Great Wheal Metal	Penryn Wheal Metal	Wheal Squire (St. Erth)
Great Work Consols	Penryn Wheal Metal	Wheal St. Cleer
Grylls Wheal Florence	Penryn Wheal Metal	Wheal Thelby
Gunislake (Clitters)	Penryn Wheal Metal	Wheal Thomas
Gurly	Penryn Wheal Metal	Wheal Tolan
Gwinnar Consols	Penryn Wheal Metal	Wheal Trevaun
Hallam, & Croft Gwinnar	Penryn Wheal Metal	Wheal Trevaun
Hallenbagle	Penryn Wheal Metal	Wheal Trevaun
Harrobarrow	Penryn Wheal Metal	Wheal Trevaun
Hawke	Penryn Wheal Metal	Wheal Trevaun
Hendra Peter	Penryn Wheal Metal	Wheal Trevaun
Herdfoot	Penryn Wheal Metal	Wheal Trevaun
Hington Down Consols	Penryn Wheal Metal	Wheal Trevaun
Kelly Bray	Penryn Wheal Metal	Wheal Trevaun
Kilfith	Penryn Wheal Metal	Wheal Trevaun
Lamb	Penryn Wheal Metal	Wheal Trevaun
Latchley Consols	Penryn Wheal Metal	Wheal Trevaun
Leeds and St. Aubyn	Penryn Wheal Metal	Wheal Trevaun
Lant Consols	Penryn Wheal Metal	Wheal Trevaun
Levant	Penryn Wheal Metal	Wheal Trevaun
Lewis	Penryn Wheal Metal	Wheal Trevaun
Marke Valley	Penryn Wheal Metal	Wheal Trevaun
Maudlin	Penryn Wheal Metal	Wheal Trevaun

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Original Correspondence.

GEOLOGY OF THE GLOBE.

SIR.—In treating of the distribution of the different rocks covering the face of the globe, I shall divide the earth into six portions. In the north there is North America, Europe, and Asia; and in the south South America, Africa, and Australasia.

I. NORTH AMERICA.—The first land which appeared in North America was Russian America, at Bhering's Straits, with a narrow strip running south to the Straits of Panama, the whole being Silurian rock, which formed the west coast. On the east coast there is Greenland, Labrador, Canada, and a narrow strip running south to Virginia, which is likewise composed of Silurian rocks. These beginnings of Northern America form two long islands. The waters recede—caused mainly by so large a discharge of solid matter from the ocean (the two islands just named)—when the Devonian and Carboniferous rocks of Hudson's Bay and the United States make their appearance, which forms a third island, midway between the two previously existing. The waters again recede, and the oolite and chalk of the valley of the Mississippi are produced. This addition converts the three islands into two, which are now only separated by a narrow sea. The waters once more subside, when the London clay formation comes to light, which unites the two islands, and completes the formation of the North American continent. A considerable extent of London clay is at the same time added to the shores of the Gulf of Mexico. The valley of the Mississippi, as far up as the Red River, is, however, alluvial, formed by the soil carried down by the Mississippi and Missouri. The elevation of the older rocks being always greater than those which follow them, it is very evident that the formation of dry land and the appearance of new rocks has been caused, not by the upheaving of the land, but by the subsidence of the waters. The solidification of the waters by the creation of rocks, and the consequent reduction of the temperature, could not fail to reduce the water level. In modern times there are almost no traces of this action going on, but neither are there any visible traces of new rocks being formed, and without the one we cannot have the other.

II. EUROPE.—Europe began with a large island in the north, comprising Norway, Sweden, Lapland, and Finland, with a number of small islands dotted over the area now occupied by the various countries of Europe. The waters having receded, the Devonian and carboniferous rocks are added. The waters again subside, and the oolite and chalk make their appearance. The sea having been again reduced, the London clay makes its appearance, when all Europe, including Great Britain, is united and formed into one continent. The deluge, which caused the northern drift, now makes its appearance, and detaches England from the continent.

III. ASIA.—The northern and western coasts of Asia being Silurian, that would form one vast island, detached from Europe, in the form of a crescent, beginning with Siberia and Russian America, and ending with Malacca and Hindostan. The sea recedes, and large patches of Devonian and carboniferous rocks are added. The waters having again fallen, the oolite and chalk appear in China, Tibet, and Arabia. The sea is again reduced, and a vast field of London clay is laid dry, which connects Europe with Asia. This deposit forms Western Siberia and the deserts of Central Asia and Arabia. The northern part of Siberia is formed of drift or alluvial, which has either been caused by the deluge or by the soil carried down by the great rivers running north, or partly from both causes. The deluge appears to have cut through Bhering's Straits, and separated the old world from the new. The rocks on both shores of Bhering's Straits being low, and of the same description, there is every indication that this was so; and when we find the Mongolian race, inhabiting the north on both continents to this day, this theory is pretty well established.

The Arctic Ocean was probably at one time a lake, surrounded on all sides by land. This lake in the early ages would be entirely free from frost, snow, or ice, for then the temperature was much higher than it is now, of which the fossils of tropical animals found in Lapland are the proof. Suppose that the temperature was 156° at the tropics at the period of the London clay, and that there was a general fall of temperature of one-half, that would leave a temperature of 78° for Lapland and Greenland. In this state of the world this great Arctic sea or lake overflows, or is visited by a tornado or convulsion of nature. The waters burst through the barriers of land which confine them at Bhering's Straits, Baffin's Bay, and Spitzbergen, which flood the whole world, and the drifted matter found in all parts of the globe testifies to the extent and fatal results of this fearful catastrophe.

IV. SOUTH AMERICA.—This continent began with three great islands, the first forming the western coast from Panama to Cape Horn, the second comprising nearly the whole of the Brazils, and the third forming the northern coast—all being composed of Silurian rocks. The sea having receded, patches of Devonian and Carboniferous rocks are added to the dry land. The waters again subside, when a vast extent of London clay is left dry, which connects the islands, and completes the formation of South America. The alluvial formation is here very extensive, formed by the soil washed down by the Amazon and the La Plata.

V. AFRICA.—This vast continent began with one great island, forming the southern half of Africa and the western shores of the Red Sea. Patches of carboniferous rocks are next added. The sea having receded, a strip of oolite and chalk appears along the shores of the Mediterranean, which forms a second island. The waters again subside, and a vast deposit of London clay, forming the great desert of Sahara, completes the formation of the African continent.

VI. AUSTRALASIA.—The great island of Australia began with an island in the form of a crescent, composed of Silurian rocks. At the same time, the islands of Borneo, New Guinea, Tasmania, and New Zealand were formed, which are likewise Silurian. The waters having receded, strips of carboniferous rocks appear on the eastern coast of Australia and in most of the other islands. The coasts are next skirted with oolite and chalk, left bare by the receding of the waters. The ocean having again subsided, the centre of Australia—which is London clay—becomes dry land, when the island continent as it now exists is completed.

There is a great want of land in the South compared with the North. Land appeared first in quantity in the North, which impeded the natural flow of the currents of the ocean in that region. It was different with the South, where there was comparatively little land, and where the currents pursued their course with little interruption. The peculiar shape of the land in the south, with pointed ends turned southward, as in the case of South America, Africa, Arabia, Hindostan, and Malacca indicate a flow of water to the north, which had wasted away the land, and left the continents of the shape they now are. While the northern drift sent the water from the north to the south there would of necessity be a counter current from the south to the north, and while there are indications of the one current in the north, there are equally strong indications of the other current in the south, as has been already explained. When new additions of dry lands are made, new deposits of rocks now unknown will cover the new land. We have been ganging the waters of the Atlantic, and if we could bore down a few hundred fathoms in the bottom of the sea we should know what those new rocks are. The following table gives the probable quantities of the different rocks covering the six portions into which I have divided the globe. The figures represent millions of square miles:—

	Silurian.	Carboniferous.	New red London drift and alluvial.	Trap.	Total.
1.—North America	3	2	1	1	7
2.—Europe	14	1	1	1	17
3.—Asia	34	3	1	1	39
4.—South America	24	1	1	1	27
5.—Africa	6	1	1	1	9
6.—Australasia	14	1	1	1	17
Total	117	17	7	7	148

It will be observed from the above estimate that there are more Silurian rocks on the face of the earth than any other—viz., 17,000,000 square miles; London clay coming next, which extends to 14,000,000 miles. Of Devonian and Carboniferous rocks there are seven and a-half millions of miles; of new red sandstone and chalk, three millions; of trap and granite, two millions; and of drift and alluvial, six and a quarter millions. The vast extent of the London clay points to that period, or rather the one immediately preceding it, as the age of the earth when the absorption of the waters, and the consequent reduction of the temperature, went on most rapidly, for we may always measure the fall of the water-level by the extent of land uncovered.

The generally received theory of the drift is that the Arctic Sea was frozen over at the period of the London Clay. The ice was broken up by some convulsion of Nature, which drifted enormous icebergs over the whole world, carrying on their backs huge masses of soil and rock. That such an improbable theory should have gained ground among scientific men

only shows the want of some better theory to account for the facts of the case. There is no want of evidence to show that the Arctic Sea could not have been frozen over at the time of the drift; and it is equally impossible to conceive how the icebergs could be loaded with rock and soil, as they are said to have been.

The theory of the drift which I have ventured to propose is, in my opinion, a very probable one. One-half of Siberia consists of drift and alluvium, not confined merely to the estuaries of rivers, but stretching along the whole coast, from the White Sea to Kamtschatka, a distance of many thousand miles. This enormous mass of drifted matter indicates a vast accumulation, caused by the influx of the rivers running north on the one hand, and the pent-up waters of the Arctic Sea on the other. Should a new exploring expedition be sent to the North Pole, it would be well to take this new theory into consideration, and to furnish any facts that may be gathered tending to elucidate the subject.

Such is a general estimate of the structure of the earth, and how the dry land emerged from the bosom of the waters. In my next letter I shall go more into detail, and give the particulars of the rocks in some of the principal countries.—Sloane-street, Aug. 28. A. ALISON.

NON-EXPLOSIVE GUNPOWDER.

SIR.—In last week's Journal a letter appears from Mr. Hearder on the subject of my invention for protecting gunpowder, in which he affirms that by the process of mixing and separating one-sixth of the gunpowder is, according to the patentees, lost. Mr. Hearder may be at liberty to make any statements, however preposterous, on his own authority, but he can have no right to assume my authority for a statement which was not only never made by me, or by the patentees, but is entirely contrary to fact. I cannot answer for the results obtained by Mr. Hearder in any experiments which he has made, but I am prepared to show, as I have shown, that no loss of powder arises in mixing and separating when the work is properly done, in accordance with my process. I may add that this process is so simple that ordinary labourers, without previous instruction, have mixed and separated gunpowder in the presence of engineers who have ascertained that there was not the turn of the scale difference in the weight of the powder after mixing and before. As Mr. Hearder's remarks are founded on a statement which is preposterously untrue, it would be wasting the time of your readers to notice the theories which he builds upon it. My invention has been publicly tested in the presence of gentlemen who are well qualified to form opinions on its merits. The reports in the public journals sufficiently indicate the favourable nature of their verdict. In addition to numerous other testimonies, the *Mining Journal*, in reference to the experiments at Westminster, states that "the experiments were thoroughly successful, and the process is, undoubtedly, applicable in a large number of cases, whilst the advantages to be secured are well worthy of attainment." J. GALE, Electrician.

8, Devonshire-terrace, Plymouth, Aug. 29.

COLLIERY SAFETY-CAGES.

SIR.—My attention has been directed to a new Safety-Cage, projected by Mr. C. H. Taylor, of Birmingham, the object of which appears to be to prevent the fall of a cage in the event of breakage of the rope; unfortunately, however, the arrangement seems to me not only closely similar to many others that have preceded it, but wanting both in utility and economy. Mr. Taylor tells us that he has just completed a patent for preventing that class of accidents in mine shafts, &c., which arise from the breaking of the chain or rope while the cage is ascending or descending. It appears that, according to this invention, there is placed on each side of the mine shaft an upright, with a rackwork face, and a slide on each side. Between the rackwork is a chamber, which forms the upper part of the cage, and within this are two toothed wheels, carried upon suitable bearings, such wheels running in the rack when the cage is raised or lowered. So far there is nothing particularly new in the invention, but the novelty is the mode of preventing the rotation of these wheels when the rope breaks, and the cage is left to take care of itself. Upon the platform which carries the wheel-bearings is a spring, which pulls down a brake between the wheels; but, as the upper side of this brake is attached to the drawing-rope, the movement of the cage is not interfered with whilst the whole apparatus is in proper order, yet is at once arrested in case of accident.

Now, my doubts about the invention are as to whether the first accident would not break all to pieces; for it seems to me that as the whole weight would suddenly jerk upon one or two teeth of each part, there is nothing to prevent destruction. But, even assuming that this difficulty could be got over by constructing every portion enormously strong, how costly and troublesome the arrangement would be? for there would be, perhaps, a thousand yards of rackwork on each side of the shaft to keep in order (and, recollect, that would be in addition to the care now necessary with the ordinary guides); there would be the bearings in the wheel-box and the teeth of the wheels to keep oiled, and the additional head gear to attend to. Now, although I am not interested either in the invention or manufacture of safety-cages, I submit that dozens have been proposed more useful and practical than this, and I think it should only be used in connection with the sling-chain, which was once suggested by Mr. Baker, the Government Inspector, for holding in drunken men, when it is necessary to send them down or draw them up a pit shaft. If the mere throwing of a toothed wheel into gear with rackwork be sufficient to arrest the descent of the cage, why apply the power secondhand? Why not fix his brake on a couple of powerful bell-cranks, which shall be forced into the rack by the weight of the cage? The fact is, all arrangements with rackwork on the guide-rods are non-practical, and can but disappoint those who have been unfortunate enough to conceive them.

The only recommendation which I conceive Mr. Taylor's arrangement to possess is, that it is brought into action every time the cage lands, so that a defect cannot remain undiscovered; but this is an advantage common to many cages; and when he states that he has submitted his invention to many first-rate men, and that these have expressed their admiration of its effectiveness and simplicity, one is disposed to ask whether those gentlemen were connected with colliery operations; for the idea, whilst almost void of novelty, is that which is first struck upon by the philanthropic.—Birmingham, Aug. 29. W. M.

IMPROVED STEAM CARRIAGE.

SIR.—I have heard some glowing descriptions of a new steam-carriage for common roads, invented by Mr. Perry Dickson, an American gentleman, and some of our amateur firemen have proposed to introduce it here, but I must confess that I cannot understand how it is to work, or rather how it is to commence running sooner than other engines, for that is one great claim made for it, and I should be glad if any of your readers would give me some information concerning it. The particulars I have received of the engine are that its distinguishing feature is the arrangement for graduating the power of the engine to the work to be done, so that heavy grades, or stiff miry ground, can be ascended or run over with ease. The arrangement consists in applying the power of the engine nearer to or further from the axle, and in this way exerting greater force upon the wheels when unusual obstacles oppose them. This alteration can be made at any time whilst the engine is in operation.

There is another novelty in the way the power is transmitted to the driving wheels. This consists in toggle-joint movement, so arranged that one arm bites on the inner face of a metallic belt bolted to the driver, thus dispensing with a crank, and allowing the engine to work freely in all positions or inequalities of the ground; it also allows the side levers to make a short or long stroke. The piston-rod connects to a quadrant, which has bearings so arranged that when the engine is in motion the quadrant will have a rocking movement to and fro. On this quadrant there is a sliding head, to which the connecting-rod is jointed. This latter rod gives motion to a transverse rock shaft, from which the main rods run to the driving-wheels. The connecting-rod is jointed, and has a forked end, which enables it to embrace the link, and the sliding head is furnished with a rack, through which the head is raised up or lowered down in its quadrant. Suitable means are provided to retain the sliding head in its working position, wherever it may be placed. There is a small fly-wheel attached to the frame, which serves to steady the motion of the engine and operate the valves thereof; it has also a driving-pulley to run any kind of machinery, independent of the carriage, if it is ever needed.

By these arrangements—that is, the sliding link for regulating the amount of power to be transmitted to the driving-wheels, and the substitution of the toggle-joint arm acting on the driving-wheels for the crank motion, it is possible to use one cylinder instead of two, thus simplifying the apparatus, reducing the weight, and enabling the machine to be started at any time, for there are no dead centres to overcome, and the motion is easy and continuous. The machine is capable of going in any direction,

either backward or forward, by throwing either set of the toggle-jointed rods in or out, and it is stored in front by gear there placed. When the sliding beam is moved up until it is in line with the rock shaft, it is then the point of no motion, but the engine yet runs while the carriage stands still. In this way the power may be used for driving pumps or other machinery of any kind whatsoever, and this without disconnecting any rod. Now, I cannot understand how the engine can be started at half steam, and it appears to me that whatever stroke would be made past the quadrant, it would be made back, and I should much like to be enlightened.—*Liverpool, Aug. 30.* J. C. B.

MINING IN AMERICA—LAKE SUPERIOR.

During the late rebellion, while greenbacks were abundant, and copper realised extraordinary prices, a vast amount of attention was given to mining investments in this region. New mines, with little or no merit, sprung up like mushrooms, and many of them have been abandoned quite a substantial public attention; at least, on surface, though, in many instances, their mineral resources have been but little tested. The old tale has to be told—"vast amount of money spent, extravagance in surface arrangements, neglect of underground work, and little or no return." and now money is scarce, copper falling, and the more attractive mines of the West drawing public attention, we may say the testing of the Lake Superior mines has been retarded. The natural consequence is that things are going "endways" in many mines, and Lake Superior is experiencing a harder time than has been felt for many years. After the fever of excitement depression follows, but a healthy reaction is sometimes sure to come. Mines of actual promise are suffering now with those that are unproductive; those that a little further expenditure would place on a firm basis are being neglected, with those that have been only of value in the market. In fact, the best and most promising mines on the Lake will probably sell. This cannot hold long, and now is the time for the experienced and cautious to step in and advantageously invest.

As many of the readers of the *Mining Journal* are unacquainted with the character of the mines here, I send you a description of one of the richest and most important in the region.

The *Curr Mine* lies about 2½ miles south of the shore of Lake Superior, and is situated under and on a bluff of greenstone, rising precipitously to a height of some 200 feet. At the foot of the bluff, and separated from the greenstone by a slide—the slide of the district—lies a fine-grained trap-rock, through which runs numerous and parallel belts of amygdaloid, varying in thickness from 3 to 12 feet. This, with the amygdaloid and trap-rock, dips north under the greenstone at an angle of about 28°. The vein was found cropping out in the face of the bluff, and, though containing copper and silver, was of no commercial value in the greenstone. It varies in size from 1 to 5 feet, bears a little west of north, and underlies a little vein, principally composed of quartz (portions of the surrounding rock), native copper, and a little native silver. There are two perpendicular working shafts. Avery's engine-shaft is sinking under the 120, and north of this about 180 fathoms No. 4, now down to the 130. Besides these, there are the old engine-shaft 14 fathoms south, and No. 3 15 fathoms north of Avery's. These are down to the 70 and 80 fm. levels respectively. Neither of them is in use but for footways. The levels now driving are the 130, north and south of No. 4, the 120, 110, and 100 fm. levels, north of same shaft. These shafts are communicated with Avery's, and driven in that direction beyond the copper-bearing run of ground, as well as the levels above. Above the 100, north of No. 4, the levels are extended sufficiently near the slide, and suspended. The copper ground is about 1000 feet in length, being limited north by the slide, and dipping at the same angle with it under the greenstone. This renders the mine more expensive to work than it otherwise would be, the sinking a shaft through the greenstone being not only a question of expense, but of time. The 4 shaft was sunk to the 60, 105 fathoms from surface, before it got through that rock, or could be of any service in the working of the mine, and a shaft still further north, which the mine seemingly requires, would have to go deeper before becoming available. To remedy this, preparations are being made for sinking an incline from the 100, at No. 4 shaft. In driving levels and sinking winzes the vein is seldom carried, its character rendering it difficult to take down, this is done in stoping, when it is deemed for as great length and height as may be convenient; large holes, 4 inches in diameter, are then drilled behind the vein and blasted; these generally have the effect of making a rent that will hold considerable powder, which is continuously put in, until, in some instances, two or three 25-lb. kegs are used at one blast. When the vein cannot be broken in this way, a small drift is driven for a few feet behind it, and five or six kegs of powder, in some instances more—fifty have been used—put in, slowly covered with fine dirt, and fired; this is termed "sand-blasting." The quantity of powder used is regulated by the quantity of copper the mine is supposed to carry. Sand-blasts throw out frequently masses of native copper, weighing from 10 to 15 tons; the largest I hear of, found in the Cliff, produced near 200 tons; these have to be cut with picks, which is slow and laborious work, into pieces weighing from 2 to 4 tons. Copper cutters are paid \$15 per superficial foot. Copper, though found in large masses, is of every variety of size, down to that of the finest wire, and always in a metallic state. Discharge of stuff throughout the mine is well ordered, though slow. Wagons are in general use underground; trip-laths at all the levels; at the engine-shaft buckets are used—No. 4 shaft skips; 20 cwt. of stuff are raised at a time. Wire-rope is used for hoisting dirt. Masses of copper are raised with a large capstan rope. Though the water is more than a common amount for Lake Superior mines, it is trifling for the depth. A 6-inch drawing-lift discharges the water from No. 4 shaft, in the 120; this runs back to Avery's; 6-inch drawing-lifts are fixed here from the 100 fathom level down. A 7-inch plunger forces the water to the 70; and two 10-inch plungers, one in the 120 and the other in the 70, forces it to the surface. In connection with the plunger-lift there is an arrangement for keeping the poles from draining the cisterns and taking air—no matter how fast the engine may work; it is self-regulating, is simple and perfect, in fact, is the desideratum when necessary; yet I do not believe that such a contrivance is to be found in half-a-dozen mines in the world. A man-engine, two rods, works in Avery's shaft, raising the men from, and lowering them to, the 100 fathom level; it is contemplated to carry the rods to the 130, when the shaft is sunk to that depth. Though the engineer never had an opportunity of seeing any of these at work, it is a most substantial piece of work, superior to anything I have seen in Cornwall, except in the driving-gear. It was put to work last winter, and cost \$35,000 dollars. There is a 35-inch rotary pumping-engine, two whim-engines, with capstans attached, and a 6-inch stamping-engine; steam-machinery is also used in the fitting-shop, and to drive belting for the smiths; there is a substantial dry, or changing-house, copper yards, and all other necessary buildings and erections required in a large mine.

Copper dirt, on coming to surface, has to be broken for the stamps; in breaking this, pieces of copper, usually weighing a few pounds—too large to go under the stamps, and not large enough to be sent away separately—are taken out for barrel-work. Large rocks, containing too much copper to be broken, and not enough for mass-work, have to be burnt, after which the copper is easily separated.

There are 36 heads of stamps at work, 3 axles, square heads, and iron frames, Cornish style throughout. I might notice that throughout this country, so far as I have seen, the stamp-head is always shod, so that instead of using the heads until they are worn light enough to be of little service, as soon as the shoe is worn the head is taken out, the old shoe removed, and a new one put on, the whole occupying but a few minutes. The stamps have to be stopped twice a-day to clean out the copper that accumulates under the heads. The size of the grades used I cannot give, but a combination of those in use in Cornwall for dressing copper and tin by the agent here. The heavier part is carried into jigging-machines, on which, for cleaning lead ore, the difference being that these do not require to be stopped to take out the metal, as they discharge it through a hole which all but the roughest pass, by a stream of water injected near the bottom; this keeps the whole in motion, and floats over the lighter particles, which are pressed in the old-fashioned hand-buddle, the round baffle, not the present improved one, has been used here without success. The introduction of Boreas's round baffle would make the Cliff dressing plant line, so far as the treatment of ores is concerned I believe the system the most improved, the cost being only 115 cents per ton of dirt to crush and dress. I might mention that the quantity stamped monthly is about 1500

tons. The returns at present amount to about 100 tons of copper per month, and is made up pretty much in the following proportions:—50 tons of mass work, 20 tons of barrel work, and 30 tons of stamp work.

The company started to work in 1845, and, after a comparatively small outlay, began to receive dividends in 1849; the amount paid per share I cannot give, but the total amount paid must far exceed \$1,000,000, last year's dividends being equal to any former period. The average monthly expenses for the past year have amounted to \$29,000, but this at present cannot be near so much, as a reduction of 40 per cent. has been made in wages. The number of miners and labourers employed underground and at surface amounts to about 300. I would like to give you further statistical information, but as I have nothing official to go by I refrain for the present. This will undoubtedly be a good mine for many years, and under the present judicious management will maintain, as it always has done, a prominent position among Lake Superior mines.

Keweenaw County, Michigan, July 28.

THE LISKEARD DISTRICT—EAST HERODSFOT.

Sir,—This sett is situated in the parish of Duloe, in the county of Cornwall, directly to the east of Herodsfot Mines, which have paid immense dividends, and are likely to remain very productive for years to come. The lode, so far as it has been opened on East Herodsfot, is precisely similar in character to that of its valuable neighbour. An adit level of about 100 fathoms is driven north and south, and silver-lead ore is sold to the amount of several hundreds of pounds, a striking feature being that the best part of the lode is at the bottom. The adit is driven south of the engine-shaft 50 fms., the lode averaging 18 in wide, 25 fms. of which having produced lead ore of rich quality. The present operations consist in the driving of the adit level north on the course of the lode, which has also been extended 50 fathoms, the variation in the size of which being from 1 to 2 ft. wide, and for the last few feet driving has yielded splendid stones of lead, which will make a produce of 40 cwt. of pure silver to the ton. The lode in this end contains occasional stones of lead. The driving of this adit level north for about 50 fathoms from the valley will give back to the extent of at least 30 fathoms, which in itself is considerable good speculation. Doubtless schools of lead will be met with, more especially as the ground is frequently interspersed with small flocan slides. There are other lodes which have not been opened on at all, but the principal object of this undertaking is to work the lode at a greater depth, which has proved so profitable at shallow levels. An expenditure of 2000l. would enable the proprietors to fix the requisite machinery, and see the lode 30 fathoms under the deep adit, when if it prove as rich as heretofore a permanent mine will be laid open.

Penryn, Camborne, Aug. 30.

ALBERT E. PRINCE.

CARYSFORT MINING COMPANY.

Sir,—I shall in your next reply to the letter of "A Shareholder," which appeared in last week's *Journal*, regretting that, owing to absence and unusual pressure of business, I am unable to do so in time for your next Saturday's impression. I have, however, been told by some friends, whose judgment on worldly affairs in general commands great respect, that as none of the statements of my letters have been invalidated or weakened in the least degree, but have only been met by bare assertions to the contrary, and groundless allusions and insinuations levelled against my reputation (the proof of which I have challenged in vain), constituting nothing like a reply to either of my letters, I should treat the effusions of the anonymous writer in question with contemptuous silence. I shall not, however, follow that course, fearing, as I have all along felt since the commencement of this controversy between "A Shareholder" and myself, that it would not be free from the possibility, as I have before said, of lessening me in the estimation of my friends, as well as the public generally. This last letter of "A Shareholder" adds to the number of the allusions and insinuations that he has before indulged in against me, the groundless character of which I must as fully expose as I have done those of his former very unscrupulous letters, and which I shall have no difficulty in doing.

J. H. HITCHING.

Consulting Mining Engineer to the Devon Great Consols.

THE MINES OF CORNWALL AND DEVON.

The work Mr. Spargo has just published under this title, which has been fully and favourably noticed in the *Mining Journal*, appears to be attracting a considerable amount of attention; a Correspondent, who has carefully read and analysed it, thus particularises its merits and importance.

The Mines of Cornwall and Devon: Statistics and Observations. Illustrated by Maps, Plans, and Sections of the several Mining Districts in the two Counties. By THOMAS SPARGO, Mining Engineer, Stock, and Sharebroker, Gresham House, London, E.C.

This is an interesting volume, were we only to regard it as a book for the general reader. The descriptions of the scenery of Cornwall and the confines of Devon are graphic and tasteful. The information, of a popular kind, afforded as to the geological peculiarities and mineral statistics of the great mining counties, cannot fail to gratify and instruct readers who are unconnected with any department of the mining interest, and who technically know nothing of geology and mineralogy.

We have no hesitation in saying that any gentleman, or party of gentlemen, however little given to the study of science, would find Mr. Spargo's book a very useful and most pleasant companion in a tour through Cornwall and Devon. He truly and gracefully says, in his Introduction—"Until of late years these counties were comparatively neglected by travellers in search of the picturesque, and by artists, while some elsewhere, within our own island, and upon the Continent, far less beautiful, were of fashionable resort. Now the two great southwestern counties are visited for purposes of taste and recreation as much as any parts of the British dominions. The southern coast of Devon is indented with beautiful bays and watering places, which are surpassingly lovely; the inland country graceful, undulating, and fertile. The northern coast is bold, bluff, and craggy, abounding in impressive scenery." It is the peculiarity of those counties that, take them as a whole, they possess within their almost every variety of scenery, except those of mountains of great elevation, and lakes of large expanse. But the sea views are magnificent, and the river scenery soft and reposeful.

We heartily concur with Mr. Spargo when he remarks in his very appropriate and happily conceived Introduction—"It may be truly said that no Englishman deserves to be considered well acquainted with his country who has not visited these counties, studied their resources, and enjoyed their refreshing scenes."

We strongly recommend Mr. Spargo's book as a companion volume in such an excursion; it will furnish the traveller with more and pleasanter information than he will find in any of the guide books for those counties that have been furnished.

To the miner and capitalist this book is essential; there is no other volume extant that gives the extensive, accurate, and complete account of its subject that is given by Mr. Spargo's work. All mineralogists know how important it is that the geology of a country should be thoroughly known before any mining ventures are attempted. In Mr. Spargo's "Observations" there is a clear, scientific, and detailed relation of the geological peculiarities of the county, and their relations to its mining industry; indeed, those relations are discussed with great fitness, searching analysis, and painstaking induction. This forms one of the most sterling features of the volume. The first chapter is headed "Geological and Mineral Statistics," and is entirely completed with the characteristics of the country appropriate to such a heading. The opening paragraphs of the chapter are, however, suitably geographical, describing the general formation of the counties, height of hills, river system, and relative position to the southern and western coasts of England. The topographical portions of the work are minutely detailed, but Mr. Spargo has a knack of treating topographical, geological, and mineralogical subjects with a picturesque effect, which not only relieves the mind of the reader from the sense of monotony of detail and dryness of scientific discussion, but also fascinates the attention, and affords pleasure. The topographical portions are much aided, as are indeed every part of the work, by a most judicious and a guide to the heights of hills, relative positions of mines to one another, and to the general face of the district, are all given with scrupulous accuracy. This part of Mr. Spargo's production is worth the whole price of the book many times over. The maps are beautifully coloured, appealing to the eye, and at once to the taste and understanding, through the impression of beauty and completeness thus produced. There is a beautiful little coloured map of Cornwall showing its dimensions, a map of the parliamentary divisions, maps of the various divisions and districts, and of sections of mines, all most valuable; there are not less than 22 of these maps in the volume.

As a mining guide, and a guide to mining investment, the book is a great success. Every mine in Cornwall is presented to the reader in all its features of interest and importance. The locality and history of these mines are described and stated. Then the depth, number of persons employed, the kind, quality, and power of machinery are detailed, and what is very important, the reader is told the production during the last three years of each. As a statistic, Mr. Spargo has proved himself careful and competent. His undertaking was vast, involving subjects of the largest comprehension, and matters of the minutest detail; and he has so acquitted himself as to remind us of the trunk of the elephant, which can pick up a pin and upset an oak.

Details of such a character are not only important, but essential for sure guidance in mining investment; and the necessity of mastering information so varied and extensive proves that the mining agent who is consulted by the investor should be thoroughly possessed of the requisite local intelligence. A capitalist who desires to embark his money in progressive mines, rather than merely risk it in share buying, amidst the perils of the "bulls" and "bears," must either make himself acquainted with the contents of Mr. Spargo's book, or consult some one who has.

We have mining details published under the sanction of Government, such as the Annual Mineral, by Mr. Hunt, issued under the direction of the Treasury; but there can be no comparison between such and the work of Mr. Spargo; the latter is more comprehensive, more detailed, and infinitely more practical, and adapted to the investor's purpose. When we remember, too, that this work is the result of the enterprise of an individual, while the whole country has contributed to the other, we feel that the tribute of warm commendation is Mr. Spargo's due.

We cannot conclude this notice without expressing our approval of the spirit in which the author has performed his task. There is no bias to serve a friend or hurt a rival. Mr. Spargo has taken no more notice of his own mines than of any others; indeed, he has rather erred on the side of modesty, and been somewhat unjust to himself. Mr. Spargo has announced his intention to issue a smaller treatise, on the same plan, of the Mineral Statistics of Devonshire, of Wales, and of the Isle of Man, which has now become a most interesting and productive theatre of mining enterprise. We shall be happy to notice Mr. Spargo's new work, and congratulate him upon his present success, and can assure him that if the books he is about to publish be conceived and executed with the same ability, spirit, and taste, they will meet with public approbation.

THE DOWING ROD AND PETROLEUM—OIL SMELLERS.—A

correspondent of the *Pittsburgh Oil News*, visiting the oil regions, has come across this class of "indecipherables." He tries to picture them, and does it in this strain:—"Did you ever see an 'oil smeller,' and can you tell to which of the three kingdoms it belongs? And would you think, from its name, that it has a soul to be saved? An oil smeller is a fellow who goes about, like the old water finders, with a fork of witch-hazel in hand, that obligingly points to a clock whenever there is oil beneath it. There are, perhaps, a dozen of these grumpy wizards perambulating

lating Vnago county, and locating wells after this fashion, in consideration of a \$10 bill; and what is stranger, there are plenty of people with the \$10 bills. There is a vein of superstition running through all human nature, whether in Salem or Hellam or out of them, and good old Dr. Mather was only a little honestier than most men, and confessed it."

ROYAL CORNWALL POLYTECHNIC SOCIETY.

The annual meeting for 1865 of the Royal Cornwall Polytechnic Society for the Encouragement of Science and the Fine and Industrial Arts opened on Wednesday. As is usual, the oil paintings and water colour drawings are arranged in the gallery; the other constituent portions of the exhibition in the body of the hall. Merely mentioning in passing that there are some fine examples of the works of professional artists on view, and a capital show of amateur productions, we shall at once proceed with our notice of the other departments. Occupying the centre of the hall is what may now be termed the personal fern-edged fountain, whose murmurous plashing must by this time have grown quite familiar to the frequenters of the Polytechnic. Also, in the centre of the hall, but nearer the presidential chair, is a memorial monument of Cornish granite, made on the premises of the Messrs. Freeman and Cheesewring Granite Company, at Penryn. It stands some 8 ft. high, weighs nearly 4½ tons, and is a beautiful specimen of workmanship. The surface is polished, the remainder finely toolled, and the letters of the inscriptions are gilt. The design is very simple—a draped urn surmounting a pedestal. The monument has been, we believed, executed to be forwarded to Australia. There are other specimens of worked granite; but in connection with this branch of native industry the visitor should not fail to notice the beautiful examples of serpentine manufacture, sent by the Serpentine Company, Penzance. On one side of the hall there is a column of dark red serpentine, streaked with steelite veins, standing 7 ft. or 8 ft. high, and with a parcel gilt capital; and opposite it is a more elaborate piece of workmanship in the same material, exhibiting different varieties of this almost the loveliest of ornamental stones. The remaining portion of the central space—that on the entrance side of the fountain—is occupied by a stand of the decorative broom manufactures of the Colebrook Dale Company. The most prominent piece is a magnificent fifty guinea vase, covered with figures in relief, and grouped around this are some dozen of the company's best statuettes.

The Mechanical Department next claims attention. Messrs. Waviah Brothers, of Torpoint, are the largest exhibitors. They show a number of their lamps, exemplifying the manner in which their patent method of burning paraffin oil, which has answered so admirably for maritime use, may be applied to almost any of the purposes for which artificial light is required. Mr. Hosken, of Hayle, sends the spring stone-boring apparatus shown by him last year. It is a very ingenious contrivance, but its practical utility may be doubted until it has stood the test of trial. That holes for blasting should be driven by machinery instead of by hand is very desirable, and every suggestion to that end deserves to be carefully examined upon its merits. Dolcoath, the most famous of the Cornish tin mines, possesses a set of dressing-floors unequalled, probably, in the world for economical arrangement, mechanical adaptation, and magnitude. A working model of the improved buddle, stirrer, and packer in use there has been contributed, and will be examined with interest. A second model of stirrers and packers comes from another quarter. It is not quite in working order, but the principle seems to be the placing of the packing-hammers between two knives, one of which is, therefore, struck with the forward, and the other with the backward movement. Also of interest to miners is Mr. G. Copeland's newly-designed tamping-bar, constructed with the view to prevent the accidents so frequently arising from the premature explosion of holes whilst being tamped with the ordinary iron bar. It is many years since it was suggested that the use of lamp-jacks of copper or brass would prevent such accidents, and as neither of these metals gives a spark from concussion with rock, Copeland's bar is, however, expensive; and mining is a pursuit that requires to be followed with economy, especially in these latter days. The practical solution of the proposal has, therefore, been felt to be the shoeing of the iron bars with copper or brass, as the case may be. The only difficulty in the way of the adoption of this plan is the provision of a secure method of attachment for the two portions of the implement. Soldering is hardly strong enough; and hence Mr. Copeland has introduced a bar, the brass termination of which screws into a socket in the iron handle, and is further fastened therein by a screw from the outside. Mr. Good, of Falmouth, sends an improved implement for ascertaining the grain of coals. Mr. Heath, of Plymouth, a compound microscope. Mr. J. C. Tippet, of the Locomotive Works, Newton, a beautifully-finished model of a horizontal steam-engine. A portable engine of one-horse power is exhibited by Mr. Dinnis, machinist, of Falmouth. A couple of Hayward and Tyler's Californian pumps are shown. They received very high praise from a gentleman whose experience as a contractor for railways and other large works entitles his opinion to considerable weight. The smaller sizes are very portable, but, at the same time, of great power.

The mechanical department contains, also, two very odd articles. One of these is a flint gun, with bayonet, made by a very decrepit old man, resident in Falmouth. If used in the approaching 1st of September it would certainly be more dangerous to the sportsman than to the birds. It is, in fact, one of the queerest-looking and most primitive affairs, and might almost, for all that appears to the contrary, have been one of the first attempts at improvement on the matchlock of our celestial friends. The other oddity is a contrivance by a Mr. Standish, an artisan, it was stated, resident in the metropolis. It is an apparatus for the self-closing of windows during a shower of rain. Let this be fixed, and the occupants of a house may safely go to take a walk while an April day is smiling, leaving the windows open to air the rooms, feeling assured that should an April shower come on no rain will find admittance into the apartments, if only the apparatus acts. Whether it will act or not depends entirely upon the solubility of a knob of sugar. The sashes being opened, a couple of India-rubber springs attached are hitched on to hooks in the frame. The effect of this would be to shut the window were not their action resisted by the pressure of a bent rod attached to the lower sash on a piece of sugar. The sugar covers the aperture of a tube, into which the bent rod, were its action unimpeded, would sink, and offer no hindrance to the action of the springs. So long as the sugar remains solid the apparatus is idle, but directly a shower of rain comes on the sugar, being wetted, dissolves, and without further ado the window closes!

Another set of metropolitan contributions are of a very different character. They consist of architectural perspective models of St. James's Palace, Marlborough House, and Spencer House, by a Mr. Rubery, a painter. They are enclosed in frames for hanging against a wall, having a semi-pictorial appearance, and a photograph taken from them has really quite the effect of an original from nature. The mention of photographs naturally suggests allusion to the photographic department of the Exhibition, which was never so full of beauties as now. The model of a stone-crushing machine (Blake), shown by Mr. H. E. Marsden, of Leeds, is very simple in construction and effective. The crushing is performed by a crank motion, the leverage power being very considerable. The model crushes with the greatest facility portions of quartz rocks, and separates the particles by means of a round riddle, to which a jiggling motion is imparted, into the sizes required.

There is, on the whole, a good show of articles more or less remarkable under the head of Natural History. Mr. Sharpe, contractor for the Devon and Cornwall Railway, shows a stone hammer, found in Iton cutting, on a common about seven miles east of Okehampton. In size and shape it much resembles a modern sledge-hammer, except that the cutting end is rather more axiform. It is perfectly formed of a material allied to the granite, there being no such stone in the neighbourhood where it was discovered. In weight it is about 6 lbs., and the edges of the handle holes are rounded in such a manner as to give the idea that it has seen considerable service. There can be no doubt about the human handwork on this tool; but it does not appear whether the position in which it is found will cause it to be dragged into the prehistoric man contrivance. The other curiosity is a lump of a metallic character found in ploughing a field at Par, and shown by Mr. Copeland. Of its composition nothing is certainly known; and concerning its origin opinions differ. Some there are who consider it to be an aerolite; others set it down as a piece of furnace slag. It is a magnet, and its specific gravity is 9.7; and, but for some cavities, it is supposed would be 10. It is thus much heavier than iron, the specific gravity of which is under 8. It has been ascertained that it contains iron, tin, and sulphur, and that arsenic does not enter into its composition. There is no trace of nickel, the presence of which would be looked for in an aerolite; but other metals are known to be among the constituents, although what they are has not yet been ascertained. Messrs. Howard and Wood show a model of their self-feeding sails. Mr. W. Dodder, of Truro, exhibits a quantity of his manufacture in wood ware. Messrs. Caley Brothers, of Windsor, exhibit some specimens of their newly-invented and patented cotton diaphane, intended for roller window blinds. Designs are woven in this material of a finer texture than the body of the cloth, and the result is the production of luminous patterns, combining ornamentation with the necessary shade, and, as the patents add, "imparting a highly finished effect to windows at a moderate cost." There is also seen one very fine electrolyte, a copy of the well-known Cellini shield, and a few smaller ones; but this branch of art is all but unrepresented, and may be suggested as worthy the attention of amateurs. A mechanical lady, who takes all the money that is given to her, and when she has as much as is worth a bow, makes one turn round and throws the coins into a box, will be found close to the entrance. She is a visitor from Redruth, and is collecting for the funds of the Castle dore. Messrs. Prentice and Company, of Stowmarket, show a case of gun-cotton prepared upon Baron De Lenz's process.

The report of the Mechanical Department was read by Mr. C. Fox, from which we quote as follows:—"The judges in this department have to report that, although the contributions are few in number, there are some of considerable interest and value, especially those connected with the mining operations of the county. They have much pleasure in recording the award of a first silver medal to Mr. Husband's excellent method of preventing the explosion of steam-boilers, by means of a fusible plug, fitted into the tube of the boiler, with a rod attached to the case, by means of which, in the event of the boiler beginning to collapse, the plug is wrenched out, and the water flows in upon the fire. A silver medal has also been awarded to a self-adjusting dial, manufactured by Messrs. Newton and Wilton, from the design of Capt. Henderson, the level being always preserved by means of a pendulum attached to the under surface of the dial. They would next advert to the very admirable and striking plan of Botallack Mine, which has been forwarded by Capt. Henderson, and which exceeds in beauty of workmanship and correctness of detail any plan of the kind with which the society has been hitherto favoured, and to which they have awarded the first silver medal. In connection with this they would advert to the plans and sketches of East Pool, by Capt. Maynard, which are accompanied by sketches and statistics of the mine, which must have involved an amount of time and ingenuity deserving of the very highest commendation; to these they have awarded a silver medal. They have also awarded a first bronze medal to Capt. Thomas, for his model of a tin-dressing apparatus, including a convex round buddle, not as a new invention, but for very successful application on a large scale at Dolcoath. They also consider Waviah's application of paraffin to ships, and ordinary out-door lamps a very valuable improvement, and have awarded a bronze medal. A model of a hand-boring machine was submitted to the judges by a young competitor from Redruth, and, although there are many obstacles to its effective working without attention, it was considered that, the object being so important, a small prize should be awarded, to stimulate further efforts in this direction. Blake's stone-crusher was considered deserving of a second silver medal. The judges consider that it might be advantageously introduced into Cornwall, particularly for spalling tin."

The following is the list of awards for the Mechanical Department:—Model of dressing-machine, as used at Dolcoath, Mr. W. Hale, first bronze medal; models of garden-engines, Messrs. Hayward and Tyler, honourable mention; patented lamps for burning paraffin, applied to out-door purposes, Messrs. Waviah and Co., Torpoint, first bronze medal; Blake's refrigerator, honourable mention; economical wringer, Mr. Atkinson, second bronze medal; working plan of Botallack Mine, Capt. Henderson, first silver medal, or money prize of the value of £1. 5s.; collection of wood carvings, Mr. Dodder, Truro, 1l. 10s.; model of stationary engine, made by an apprentice, Mr. Tippet, Locomotive Works, Newton Abbot, first bronze medal, or 1l. 10s. in money; self-adjusting dial, Capt. E. Henderson, C.E., first silver medal; gun label damper, Mr. H. Greenlade, second bronze medal; plans and sketches of East Pool Mine, Mr. J. Maynard, second silver medal, and special commendation; egg-boller, Mr. Standish, 1l.



BRITISH MINES.

The 65, west of Collins's cross-cut, is continued by the side of the lode, and fair progress is being made. In the 45 east the lode is 4 ft. wide, composed of quartz, pyrite, magnetite, and some ore—promising. In William's cross-cut north, in the 35, west of Hitchin's engine-shaft, the ground is somewhat easier, and more metalliferous.

the shaft is producing everything that can be expected; it is highly mineralised, and the prospects are all that could be desired for success at a little more depth.

SOUTH CARRADON WHEEL HOOPER.—W. C. Cock, Aug. 26: We are getting on the 12. At the present we have discovered that this part of the shaft is producing good solid manganous ore, and at present it has every appearance of improving.

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8 in. wide, saving work for tin. The lode in the 90, east of Hollow's, is 16 in. wide, worth 81. per fm. The lode in the 70, east of Hollow's, is 14 in. wide, worth 41. per fm. The lode in the 60, east of Hollow's, is 15 in. wide, worth 31. per fm. The lode in the 50, east of Hollow's, is 14 in. wide, worth 31. per fm.

TREVENEN AND TREMENEHEE.—John Medley, Charles George, Aug. 30: The lode at Trevenen shaft, sinking below the 172, is 3 ft. wide, and fair, composed of free-spar, brent, prill, and tin, but scarcely enough of the latter to value. We have just discovered a splice coming in to the north in the 172, east of the above shaft, which appears to be the main part of the lode. We have commenced cross-cutting this close to the end, and shall be enabled to report more fully on it in the course of two or three days.

The lode in this level, going west, is 9 in. wide, composed of free-spar, gossan, capel, and tin, worth 21. per fm. No. 1 stop, in this back, is worth 41. per fm.; No. 2, 61. per fm., and No. 3, 31. per fm. The lode in the 172, driving east of new pump-shaft, is 3 ft. wide, composed of free-spar, capel, prill, gossan, and tin, worth 31. per fm. The stop in this back is worth 41. per fm. The ground is good in the cross-cut, and the men are likely to drive 12 fms. this month. No change in the tribute department to call for remark.

TREVENEN.—T. Foote, J. Steele, Aug. 29: We are making good progress in sinking the engine-shaft, and hope to have the same down to the cross-cutting driving by the latter part of next week. We are making fair progress in the 40 north. The stopes in the back of this level, two in number, are producing 4 cwt. each of lead per fathom. We have not met with the lode in the rise in the back of the 40 south, south of the slide; the stop in the back of this level is producing 6 cwt. of lead per fm. We have resumed driving the 30 south, but have not taken down any of the lode. We have suspended the sinking of the winze in the bottom of this level for the present, owing to the water being more than we can keep by manual labour. This winze will be resumed again as soon as the lode is met with in the rise south of the slide, which is now keeping up the water. There is no change in the stopes in the back of the 40 since last report, still producing 6 cwt. of lead per fm. At present we are making good progress in clearing the quarry, and shall be all ready for raising stones in a few days, also clearing out ground at the old engine-shaft. We shall also commence about the lobby for water-wheel to-morrow.

VALE OF TOWY.—Thomas Harvey, August 29: There is no alteration in the stopes above the 124, north of Field's shaft, since our last. The men have been engaged in clearing their last three months' stuff. The lode in the drift, south of said shaft, is 3 ft. wide, producing 1 ton of blende per fm. The lode in the drift, south of the same shaft, is small, being low to the east by a hard bar of ground come in on the west side. The stopes in back of the 110 south of Wrenall's boundary, are 4 in. wide, producing 2 1/2 tons of blende per fathom, as last reported. William's shaft, in the back of said level, north of Field's, is worth 2 tons of blende per fathom. Curtis's pitch, in the same level, north of William's, is worth 4 tons of blende per fm. We calculate to sample our usual quantity of No. 1 quality blende on Saturday next.

VIGRA AND CLOGAU (Gold).—J. Remfray, Aug. 31: At No. 2 mine, No. 3 sink is in a fine lode, showing occasionally blamish and specks of gold. We have been much troubled with water, owing to the heavy rains, which have much impeded progress. The quartz from which we broke rich stones of gold 3 feet above the present bottom is holding down almost perpendicularly. When the sink is 3 feet deeper we shall take down a piece of the lode on the side to test for gold. No. 1 sink is looking well, and the stuff tests well for gold. The water has been troublesome here likewise. In No. 1 mine the lode in the 10 west is 4 to 5 feet wide—good quartz. We shall soon require the steam-engine the company has purchased to deepen the shaft below the 10. The stopes are as usual.

WALKHAM AND POLDICE.—J. Lean, Aug. 26: In the 50, driving north, rapid progress is being made, the country being a congenial lode. The branch referred to in my last produces very rich stones of copper ore. In the stopes in the back of the 38 we have been dealing the lode during the past week, and next week we shall take it down: when last we produced good work of copper ore. In the winze sinking from the 26 level, good progress has been made, the lode producing good stones of copper ore. The machinery is in good working order.

WELSH (Gold).—W. Vincent, Aug. 31: The trial upon the silver-lead lode at Dean's workings is progressing well. We are carrying a stop eastward upon its back; the leader part is worth 1 ton of silver-lead ore per fathom. In the western end of the stop the lode is equally good. We are taking down about 80 tons of the stuff to dress at the stamps. In a short time I shall be able to report more fully upon this place, as our present object is to try the length of the run of ore ground there. At Cefn Coch the drive west upon the lode shows a good deal of blende, the best for gold; it is also as disseminated as that was last week; we seem to be coming under the junction of the two bunches of the lode. At Berthwyd No. 2 the stop west is not yet through the cross-joint, of which more has appeared than was at first visible. We hope the lode will much improve west of the cross-joint. The sink under the bottom of No. 2 level, and the end of the No. 1 level beneath, are in a lode containing a good deal of sulphate of barytes and large-grained munda, which we are about to try for gold.

WEST BASSET.—W. Roberts, Aug. 30: On the middle lode, in the 65 east, the lode is 1 ft. wide, yielding stones of ore. In the winze sinking under the 52 the lode is 1 1/2 ft. wide, producing 1 1/2 ton of ore per fm. In the 52, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 51, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 50, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 49, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 48, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 47, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 46, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 45, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 44, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 43, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 42, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 41, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 40, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 39, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 38, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 37, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 36, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 35, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 34, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 33, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 32, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 31, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 30, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 29, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 28, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 27, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 26, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 25, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 24, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 23, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 22, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 21, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 20, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 19, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 18, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 17, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 16, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 15, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 14, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 13, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 12, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 11, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 10, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 9, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 8, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 7, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 6, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 5, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 4, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 3, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 2, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm. In the 1, driving east, the lode is 3 ft. wide, producing 1 1/2 ton of ore per fm.

WEST BEAM.—Wm. Hoeking, Aug. 31: Brothers engine-shaft is now sunk 9 fms. 1 ft. below the 45, and the ground continues favourable for progress; we are sinking here by the side of the lode, and shall continue to do so until we reach the 60, at which point we shall cut through it, and ascertain its value. The men are making good progress with the extension of the cross-cut, and stop of Brothers engine-shaft, which they have carried down 48 fathoms, and the appearance of the end promises a lot of copper, and equally rapid drivages. The water is still gradually sinking at the Union shaft, and is now 5 fms. below the adit level. The cross-cut driving north of shallow adit, on Union lode, east of cross-course, has been suspended since my last, as the men who were engaged therein have been required elsewhere; this drive will, however, be resumed in a few days. Our pitches in the backs of 45 and 55 continue fairly productive, and are without change since my last report. The tributaries in the bottom of the adit level, on Union lode, have also broken some very rich work during the past week; much ground appears to be standing here on this level, which until the last few weeks has been covered by the water, and will now be well for taking away, and will be filled with greater facilities as soon as the 10 is drained, which, from the appearances, will be shortly effected. The recent rains, together with ample tinners, have enabled us to resume active operations on the dressing-floors, where we are making fair preparations for another sale of tin.

WEST CARRADON.—Capt. Johns and Trathan, Aug. 28: No particular change has taken place since our report for the meeting. We have to-day set our usual number of tutwork bargains with the tribute pitches, and are pushing on as fast as possible in the high backs on Jope's lode, towards the winze sinking below the adit level, in order to ventilate this part of the mine.

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Shaft: Sinking the western engine-shaft below the 100, by nine men, at 331. per fm. Driving the 100, east of shaft, by four men, at 31. per fm. Sinking the 90 winze, east of shaft, by four men, at 31. 10s. per fm. There is nothing particularly new to report, except that the lode in the 100, east of the western shaft, has a little improved, producing nearly 1 ton of ore per fathom.

WHEAL CREBOR.—J. Gifford, Aug. 31: Cock's Shaft: The summen are now engaged in putting in beams for clister, preparatory to fixing standing-lift in the 108. In the 108 we have cut through the lode, which is full 6 ft. wide, composed chiefly of capels and quartz, with spots of munda and copper ore, but of no value, yet a kindly lode. In the rise in back of the 108 west, against Bartlett's winze, the ground is good, and if it continues as at present we shall communicate it by the end of next week. The cross-cut south, in the 96 west, is being pushed on with all possible speed, and the ground favourable. In the 96 east the lode is 3 ft. wide, 1 1/2 ft. of the south part yielding 1 1/2 ton of copper ore per fathom. The stop in back of the 96 east is yielding 2 tons of copper ore, worth 91. per fm. In the 84 east we are carrying 2 ft. of the south part of the lode, which is composed of capels, quartz, peach, and munda, with occasional stones of copper ore. We intend cutting through the lode in the latter part of the week. In the 84 east the ground is favourable for driving. In the pitch in back of the 96 west the lode is worth 81. per fathom. In the pitch in back of the 84 east the lode is worth 81. per fm. In the pitch in back of the 72 east the lode is worth 71. per fm.

WHEAL EDWARD.—George Rowe, Aug. 26: The lode in the 61 west is 15 in. wide, producing fine stones of ore, with some good saving work. We sampled yesterday (computed) 34 tons of copper ore.

WHEAL FRIENDSHIP.—Aug. 28: Main Lode: The lode in the 100 east is about 18 in. wide—poor. The stopes under the 80 will turn out 2 tons of ore per fm. In the 80 east the lode is 15 in. wide—poor. Two stopes in back of the 80, and one stoper under the 70, will average 1 1/2 ton of ore per fm. In the 70 east the lode is 3 ft. wide, turning out about 1 1/2 ton of ore per fm. The stop in back of the 70 will turn out 1 1/2 ton of ore per fathom. In the rise in back of the 70 the lode is 2 ft. wide, yielding 1 ton of ore per fathom.—Bennett's Lode: The lode in the 150 west is about 2 ft. wide, yielding 2 tons of very good ore per fathom. In the 150 east the lode is 3 ft. wide, producing stones of copper and lead ore—nothing to value. In the 140 west the lode is 3 ft. 3 1/2 ft. wide, turning out 1 1/2 ton of ore per fathom. In the 110 west the lode is 1 1/2 ft. wide, with a little ore—nothing to value. The stopes in back of the 110 will turn out 2 tons of ore per fm. The stopes in back of the 100 will turn out from 1 1/2 to 2 tons of ore per fm. In the winze sinking under the 100, east of the dock cross-course, the lode is 2 ft. wide—poor. In the 180 east the lode is 2 ft. wide, yielding 1 ton of ore per fathom. In the 76 east the lode is 1 foot wide, and will turn out 1 ton of ore per fathom. At Bennett's shaft, sinking below the 30, the lode is from 2 1/2 to 3 ft. wide—poor. In the 30, west of Bennett's shaft, the lode is 3 ft. wide, producing good stones of ore—nothing to value. The 30 east is much the same as the 30 west. In the winze sinking under the adit, east of Bennett's shaft, the lode at present is small and poor. In the adit east the lode is from 2 1/2 to 3 ft. wide, kindly—poor. Tribute pitches much the same as for some time past. Our ore weighed at Morwellham, on Friday last, was 160 tons 6 cwt., realising 12741. 8s. 8d. We sampled last week, computed, 209 tons.

WHEAL GRENVILLE.—G. K. Odgers, W. Bennett, Aug. 26: Setting Report: The 130 to drive west by six men, at 71. per fathom; lode 2 1/2 ft. wide, of quartz and prill, yielding stamping work. The 110, east of the new shaft, to four men, at 91. per fathom; lode 20 in. wide, of quartz and peach, producing a little tin. The 110 west to four men, at 31. 10s. per fm.; lode 5 feet wide, and worth 91. per fm.—a very kindly lode. Three stopes above this level to twelve men, at 21. 2s. 6d., and 21. 10s. per fm.; lode worth 101., 91., and 81. per fm. The 100 east to four men, at 111. per fathom; lode at present small, but judging from appearances we think we are very likely to meet with an improvement here. The winze to sink below this level by six men, at 141. per fm.; lode worth 101. per fm. Two stopes above the level to six men, at 21. 10s. and 21. 10s. per fathom; lode worth 101. and 81. per fm. The 100 west to two men, at 41. 10s. per fm.; lode 3 ft. wide, and worth 61. per fm. One stoper above this level, to four men, at 31. 10s. per fathom; lode worth 61. per fm. The 90 east, by two men, at 91. 10s. per fm.; lode 2 ft. wide, with a good branch of tin, worth 101. per fm. One stoper above this level, by four men, at 21. 15s. per fathom; lode worth 101. per fm. The 90 west, to two men, at 31. 10s. per fm.; lode 2 1/2 ft. wide, letting out a quantity of water, and worth 71. per fm. Four stopes above the 80, by 16 men, at 21. 10s., 31. 10s., and 31. 10s. per fm.; lode 121., 101., and 61. per fm. The rise above the 60 east, by four men, at 71. per fm.; lode worth 2 1/2 ft. wide, and worth 21. 10s. per fm. The 60 west, to two men, at 10s. per fathom; lode 2 ft. wide, and producing a little tin. The stopes above the 60, by two men, at 31. 10s. per fm.; lode worth 91. per fm. The winze to sink below the 54, east of the shaft, by four men, at 51. 10s. per fm.; lode 2 ft. wide, worth 81. per fm. The 54 west is set to four men, at 41. 10s. per fm.; lode 2 ft. wide, worth 61. per fm.

WHEAL HARRIETT.</

The following are the Government Returns of the exports of articles identified with mining, the produce and manufacture of Great Britain, for the seven months ending July 31, 1865; and also as compared with the seven months ending July 31, 1864; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—					
DECLARED VALUE FOR THE SEVEN MONTHS ENDING JULY 31.					
	1864.	1865.	Decrease.		
Coals and culm	£3,358,577	£3,468,461			
Hardware and cutlery:—					
Surgical instruments ..	£216,995	£230,737			
Agricultural implements	257,337	316,015			
Other sorts	1,797,355	2,302,177			
Machinery:—					
Steam-engines	881,614	1,136,591			
Other sorts	1,602,268	2,483,882			
Total	£7,061,436	£7,793,765			
Metals:—Iron—Pig	£ 861,753	£ 930,418			
Bar	1,634,462	1,148,992			
Railroad	2,080,819	1,938,175			
Wire	216,880	258,389			
Ditto telegraphic	181,948	107,200			
Castings	379,829	410,849			
Hoops	1,046,798	800,315			
Wrought	1,294,051	1,478,577			
Old	17,953	7,672,044			
Steel	590,065	482,122			
Copper—Unwrought	339,851	430,283			
Wrought	1,401,390	1,430,283			
Other sorts	86,082	114,173			
Brass	119,697	126,414			
Lead—Pig	449,765	278,689			
Ore	97,421	547,186			
Tin—Unwrought	282,377	263,742			
Tin-Plates	870,295	816,405			
Zinc	72,764	49,833			
Grand total	£19,016,987	£18,322,492			
Less increase—Coals and culm, 173,374; hardware and cutlery, 69,434; machinery, 469,611; brass, 12,717.					
Total decrease					
LEAD ORES.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
Aug. 28—Cargoll		63	£16 8 0	Panther Co.	
— ditto		8	6 0 0	Michell & Son.	
28—East Logyias		65	11 16 0	Panther Co.	
—Glofach		65	15 1 6	Newton, Keates, & Co.	
—Gwysywith		60	11 19 6	Panther Co.	
— ditto		50	12 1 6		
30—Dyffid		48	12 1 6	A. Eytton.	
BLACK TIN.					
Date.	Mines.	Tons c. q. lbs.	Price per ton.	Amount. Purchasers.	
Aug. 29—Drakewalls		17 0 0		£ 960 0 0	
30—Gt. Wh. Badden		3 0 0	53 4 0		
COPPER ORES.					
Sampled August 9, and sold at Swansea August 29.					
Mines.	Tons.	Produce.	Price.		
Cobre	108	11½	£3 8 6		
ditto	106	11½	8 8 0		
ditto	105	12	8 8 0		
ditto	93	11½	8 10 0		
ditto	47	20	14 15 0		
ditto	45	20½	14 15 0		
ditto	100	12	8 11 0		
ditto	98	12	8 8 0		
ditto	96	12½	8 8 0		
ditto	91	12½	8 8 0		
ditto	89	12½	8 11 0		
ditto	84	19½	14 8 0		
Reguius	84	38½	29 7 0		
ditto	82	38½	28 6 6		
TOTAL PRODUCE.					
Cobre	1185	£12,036 5 6	Copper Ore	3	£11 17 0
Knockmahon	439	2,710 11 0	British Reguius	17	449 0 0
Berehaven	360	2,676 3 0	Reidum	7	158 4 0
COMPANIES BY WHOM THE ORES WERE PURCHASED.					
		Tons.	Amount.		
Copper Miners		32	£896 16 0		
Freeman and Co.		190	1506 0 0		
Grenfell and Sons		258</			

WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.,
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Messrs. WATSON and CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon Mines and Mining, and the state of the Share Market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium published in 1843 Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. Watson and Cuell have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share-dealing than there is at present; and, from the lengthened experience of Messrs. Watson and Cuell, they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt, and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public, that they transact business in the public funds, railways, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are almost daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are enabled to supply shares in all the best mines at close market prices, free of all charges for commission.

MANUFACTURE OF PEAT FUEL.—In the treatment of peat, so as to form it into blocks capable of being advantageously used for fuel, Mr. R. F. Fairlie, of Gracechurch-street, proposes to place the roughly formed blocks, either compressed or otherwise, in an air-tight receiver, and exhaust the air and aqueous matter from the peat by an air-pump or other suitable means. Having produced the desired vacuum in the receiver, he admits petroleum thereto, which enters the pores of the peat and occupies the space voided by the air and aqueous matter previously abstracted. If necessary, he forces the petroleum into the receiver under pressure. The blocks are then withdrawn from the receiver, and if necessary separately pressed in moulds, or sprinkled with sawdust or other matter in powder to face them; they are then allowed to dry, and stored for use. Instead of peat, which, however, he prefers, he uses wood or other combustible material, and treats it in like manner—that is to say, introduces and condenses petroleum into it as before, or it may be non-combustible material, but should be extremely porous, so that when the air is abstracted it will absorb the petroleum largely. Artificial fuel so prepared is applicable for use as a substitute for coal, and may be used in the manner of coal, when used in a boiler, will possess all the constituent properties of that material, whence the inventor suggests that it shall be termed artificial coal.

ARTIFICIAL FUEL.—An invention has been provisionally specified, by Mr. Paul Baudet, of Paris, which consists in so shaping the blocks of fuel as to afford greater facilities for the circulation of the air through and around them when placed within the furnaces or fire-places in which they are intended to be consumed, whereby a better combustion and higher temperature are obtained. For this purpose the blocks of fuel, which may be of a cylindrical, rectangular, polygonal, or other form, are provided with air passages formed through the interior thereof, so as to render them hollow, or made with grooves or projections extending along their exterior surfaces in conjunction or not with internal air passages. Blocks of fuel so shaped, when piled together, present numerous air passages and interstices, along which free circulation of the air and gases can take place. In some cases it is proposed to combine resinous, tarry, or other inflammable substances with the fuel, either during the time of its manufacture or afterwards. In the latter case the fuel may be dipped in a mixture of water and resin or tar boiled together, which mixture may also be applied to fire-wood or charcoal, in order to increase their combustibility. When these blocks are too large to be readily grasped by one hand, it is proposed to indent or recess them on opposite sides, so as to afford facilities for their being easily handled.

IMPROVED PIVOT PUMP.—An ingenious machine, which may be termed a pivot pump, and which is of simple construction, although possessed of considerable power, has been provisionally specified for Mr. L. M. Petit, of Paris. It consists of two metal drums, the outer one of which is stationary, and of larger diameter than the inner one; the latter is made to revolve by means of a vertical shaft, to which an engine power can be applied. The inner drum is bolted to two half circular arms furnished with teeth gearing one with the other; these arms revolve with the inner drum and act as pistons, driving the water between the inner and outer drum before them; the water enters by top and bottom gratings made for that purpose in the outer drum. It must be remarked that the circular arms have each a support forming part of them, and by which they are bolted to the inner drum. A separation piece is so fixed in the large drum that during half a revolution of the inner drum one circular arm maintains the other in a fixed position, during which the latter drives before it the water through pipes arranged for carrying it off, and then makes a half circular movement and secures the other arm, which works in the same way. This circular movement of the arms is caused by a curved slide piece arranged for that purpose. As fast as the water is forced up by the piston arms fresh water passes into the body of the drum through the gratings.

TRANSFER OF SHARES.—The Court of Chancery will not accede as of course to an application, by a creditor, under section 4 of the 5th Vict., c. 5, to restrain the transfer of shares belonging to his debtor, but will require special grounds in support thereof. The question came before Vice-Chancellor Kindersley, in re the East of England Bank, upon an application on behalf of the official liquidator to restrain the transfer of certain shares in the Union Bank of London, standing in the name of a lady who was one of the contributors to the above banking company, and who had failed to pay a call made by the official liquidator in winding-up the company. The Vice-Chancellor said he did not see why this lady should be restrained from dealing with her own property as she pleased, unless some special reason could be shown for so doing, such as that there was danger of the shares being made away with. This was only an ordinary case of debt. Could a baker or a butcher restrain the transfer of shares of their customers until their bills were paid? His Honour refused to make any order.

SHAREHOLDER'S NON-LIABILITY AS A CONTRIBUTORY.—The Lords Justices have reversed the decision of the Master of the Rolls, in re the Adelphi Hotel Company (Best's case). It appeared that Mr. Best had paid the deposit upon and applied for twenty shares in the company, and agreed to accept the same or any less number which might be allotted to him. The secretary sent a receipt for the deposit, and the company retained and supplied it. The Lords Justices have now held that, in the absence of a formal allotment, Mr. Best was not a contributory in respect of the shares.

SHARES IN A PURCHASING COMPANY.—It has been decided by the Master of the Rolls, in the Bank of Hindustan, China, and Japan (Limited), that the 161st section of the Companies Act, 1862, which authorises the liquidators prosecuting a voluntary winding-up, under certain circumstances, to receive, in consideration of the transfer of the company's business, shares in another company for the purpose of distribution amongst the members of the company being wound-up, does not impose upon a shareholder of the absorbed company, who has not voted in favour of the voluntary winding-up, an obligation to take the shares allotted to him under this power, although he may not have expressed his dissent in writing, in the manner provided by the section.

PATENTS.—A patent for a mechanical contrivance is not valid which merely amounts to an application of a known contrivance in an analogous manner and to an analogous purpose. Thus, channelled iron had been used to fasten beams of timber making railway bridges, and by horizontally cross one another, and for the double purpose of preventing the bolt-heads from turning round, and also for giving strength to the beams. In a subsequent patent, the rails of railways having been connected similarly by iron fishes used laterally, and the fish being not channelled, but having a square hollow in the plane of its metal, and, therefore, the metal not being of the same thickness throughout, like channelled iron. This was the case of Harwood v. the Great Northern Railway Company, in which it was held by the House of Lords (affirming the judgment of the Exchequer Chamber, which reversed a judgment of the Queen's Bench), that the subject-matter of the patent had no sufficient novelty to render the patent valid, especially as the patentee did not claim any saving of metal, but merely the use of a fish of particular shape and configuration.

PRINCIPAL AND FACTOR.—In the case of Comas v. Pross, before the Judicial Committee of the Privy Council, it was decided that mere advances made by a factor, whether at the time of his employment or some subsequently, cannot have the effect of altering the revocable nature of the authority to sell, or derogate from the right of the principal to give directions as to the time and manner of sale, unless such advances are accompanied by, and made the consideration for, an agreement that the authority shall not be revocable.

PURCHASE OF SECOND MORTGAGES.—The Lord Chancellor has affirmed the decision of Vice-Chancellor Wood, in the case of Kirkwood v. Thompson, holding that a second mortgage, though he has taken his security in the form of a trust for sale, may, in the absence of fraud, purchase the mortgaged property when it is offered for sale by a prior mortgagee under the power of sale, and his right is not affected by his being in possession. Such purchase by a mortgagee cannot be impeached by the mortgagor on the ground of under-value, if the consideration was such that that question could not have been raised as between strangers.

Royal School of Mines.

ROYAL SCHOOL OF MINES.

Dr. RODERICK IMPEY MURCHISON, K.C.B., F.R.S., &c.

During the Session 1885-6, which will commence on the 2d of October, the following COURSES OF LECTURES AND PRACTICAL DEMONSTRATIONS will be given:—
1. CHEMISTRY..... By E. FRANKLAND, F.R.S., &c.
2. METALLURGY..... By JOHN FRYER, M.D., F.R.S.
3. NATURAL HISTORY..... By T. H. HUXLEY, F.R.S.
4. MINERALOGY..... By WASHINGTON W. SMITH, M.A., F.R.S.
5. MINING..... By A. C. RAMSAY, F.R.S.
6. GEOLOGY..... By ROBERT WILLIS, M.A., F.R.S.
7. APPLIED MECHANICS..... By JOHN TYNDALL, F.R.S.
8. PHYSICS..... By JOHN TYNDALL, F.R.S.
INSTRUCTION IN MECHANICAL DRAWING, by Rev. J. HATTHORNE EDGAR, M.A.

The fee for students desirous of becoming associates is £20 in one sum, on entrance, or two annual payments of £10, exclusive of the laboratory.
Pupils are received in the Royal College of Chemistry (the Laboratory of the School), under the direction of Dr. Frankland, and in the Metallurgical Laboratory, under the direction of Dr. Percy.

Tickets to separate Courses of Lectures are issued at £3 and £4 each.
Officers in the Queen's Service, Her Majesty's Consuls, acting mining agents, and managers, may obtain tickets at reduced prices.

Certificated schoolmasters, pupil teachers, and others engaged in education, are also admitted to the lectures at reduced fees.

His Royal Highness the Prince of Wales has granted two Scholarships, and several others have also been established.

For prospectus and information apply at the Museum of Practical Geology, Jernyn-street, London, S.W.

SOUTH DEVON SLAB AND SLATE QUARRIES COMPANY

(LIMITED).—The remaining shares are about to be issued. The report of the second general meeting corroborated the opinion of Mr. Evan Hopkins, that these quarries are capable of a development that will make them highly profitable. They declared a dividend of 7½ per cent. on the last half-year. The shares are £5, to be paid £1 on allotment and £4 at intervals of three months. Shareholders paying up will receive the dividends on the whole sum paid. Only 750 shares remain for allotment, and they will be allotted in order of receipt of application. Mr. Hopkins's words are "that Wood estate is a very valuable slate property, and only requires to be wrought in a systematic manner, with sufficient capital, to render it highly remunerative in the making of slabs and slates. It is a safe investment for a large capital."
The report of the directors, and of Mr. Evan Hopkins, will be sent by post to any person applying to me at 346, Strand, London, or to the local office of the company, Post-office Chambers, Exeter.
HORACE COX, Secretary.

THE GREAT MONA MINING COMPANY

(LIMITED).
Incorporated under the Companies Act of 1862, which limits the liability of shareholders to the amount of the shares actually subscribed for.
Capital £25,000, in 5000 shares of £5 each. First issue, 2500 shares. Ten shillings per share to be paid on application, and £1 on allotment.
It is anticipated that not more than one-half the capital will be required to fully develop this property throughout its whole extent, and place the mines in a dividend-paying condition.
BANKERS—Union Bank (Limited), Manchester.
AUDITOR—Mr. William Aldred, 28, Pall Mall, Manchester.
SOLICITORS—Messrs. Slater and Barling, Norfolk-street, Manchester.
SECRETARY—Mr. Joseph Taylor.
OFFICES,—No. 17, CROSS STREET, MANCHESTER.

PROSPECTUS.
This company has been formed, under limited liability, to purchase and work, under leases from the Crown, the valuable mines in course of development, under grants of mineral property, situated in the parish of Mangold, in the Isle of Man.

These grants or sets are most extensive and valuable, and are held under the usual low royalty paid in the Isle of Man to the Crown. The sets are bounded on the south-west by the well-known Laxey Mines, and extend on the north-east towards the town of Ramsey, with a considerable frontage to the sea. Immediately adjoining the mines is a most eligible site for the erection of all necessary buildings and plant for crushing and washing the ores, with abundant water-power for driving the machinery; and close by this site is the convenient Bay of Cornab, which is available for shipping and exporting the ores from the mines.

These mines can be worked by levels to a depth of 90 fms. without any pumping machinery being required, thereby effecting a considerable saving in the working expenses. Two levels have been driven for some fathoms on the course of the vein on one of the principal lodes running east and west, and it is opening out splendidly as the driving proceeds, producing copper ore of the richest quality, as proved by the assays annexed to the reports. The directors in submitting this property to the public, have not founded their expectations of the undertaking being successful on the fact that mining in the Isle of Man has hitherto been a decided success, nor from the circumstance that the Great Mona Mines are situated immediately in the same mineral strata as the Great Laxey Mines (the value of whose shares has increased above 500 per cent. during the last thirty years), but they have based their calculations on the present prospects of the mine itself, and the high opinion entertained of it by the able mining engineers and mine agents who have so carefully inspected the property.

The whole of the outlay required to develop this property will be unusually small, owing to the very favourable situation of the mine, inasmuch as the water can be cleared off to a great depth without the aid of machinery; and taking this into account, with the many other facilities possessed for economically carrying on the works, it would certainly be difficult to find another mineral property combining so many advantages.

So far as can be ascertained by actual survey, two of the principal lodes will cross each other under the apex of the hill, a distance of about 60 fathoms from the present workings. The lower level on the east and west lode is being driven on with the view of reaching this point as speedily as possible, for at the junction of the two lodes an abundant deposit of rich ore is reasonably expected to be found.

The north and south lode is a most powerful one, being rich in ore, many tons of copper having already been raised from this vein alone; and when this junction is reached by the east and west drivings, the result cannot fail to be highly satisfactory.

The extraordinary success of the Laxey and Foxdale Mines, in the island, with its acknowledged richness in lead and copper ore, and the very unusual early development of rich and valuable ore in this infant mine, hold out to capitalists and others great promise of a safe and profitable investment.

At present the east and west lode is being driven on, and it continues to improve rapidly as it pierces the hill, the rib of ore having increased considerably in width, and the vein becoming more strongly impregnated with fine copper ore, which clearly shows that large deposits of ore will be met with as the junction is approached. Already about 15 tons have been taken out, and is ready to be dressed for market.

Samples of the ores may be inspected at the company's offices, where copies of the prospectus and reports may be obtained, with every information requisite respecting the company.

The mine has been inspected by the following gentlemen:—Capt. Osborne, of the Alderley Mines; John Hiltchins, Esq., mining engineer, Cornhill, London; Edward Bawden, Esq., Foxdale, Isle of Man; Abasalom Francis, Esq., Meadow House, Holywell.

On the issue of the second 2500 shares the original shareholders will have the preference *pro rata*, but they will not be issued without the sanction of a special meeting of shareholders called for the purpose.

The liability of the shareholders is strictly limited to £5 per share, and no call can be made without three months' notice.

Five hundred shares remain to be disposed of, all the rest having been privately subscribed for.

Applications for shares to be made in the annexed form, and forwarded to the bankers, brokers, or secretary of the company, accompanied by a remittance for the deposit. In case where no allotment is made the deposit will be returned in full.

FORM OF APPLICATION FOR SHARES.

THE GREAT MONA MINING COMPANY (LIMITED).

To the Directors.

GENTLEMEN,—I request that you will allot me shares of £ each in the above company, the calls on which I agree to pay, and I hereby authorise you to place my name on the register of shareholders in respect of such shares.

Name in full.....

Residence.....

Profession or business.....

Date.....

Received this day of 1885, of the sum of

being a deposit of shillings per share on shares in the Great Mona Mining Company (Limited).

NICKEL AND COBALT REFINING, AND GERMAN SILVER

WORKS, 16, OZZELL STREET NORTH, BIRMINGHAM.

STE HEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL. OXIDE OF COBALT. (WIRE.)

REFINED METALLIC BISMUTH. GERMAN SILVER—IN INGOTS, SHEET,

NICKEL AND COBALT ORES PURCHASED.

GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX, AND

CHEMICAL WORKS.

NEAR STOKES-UPON-TRENT, STAFFORDSHIRE.

JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER.

Reference.—Professor Miller, King's College, London.

THE LIVERPOOL AND LONDON AND GLOBE FIRE

AND LIFE INSURANCE COMPANY.

1, DALE STREET, LIVERPOOL; 20 and 21, POULTRY, 7, CORNHILL, and

CHARING CROSS, LONDON.

PROCESSES OF THE COMPANY SINCE 1850.

Year. Fire premiums. Life premiums. Invested funds.

1851 £ 54,305 £ 27,187 £ 502,824

1856 £ 22,379 £ 73,781 £ 81,061

1861 £ 360,130 £ 185,974 £ 1,311,905

1864 £ 742,674 £ 286,244 £ 3,212,300

JOHN ATKINS, Resident Secretary, London.

Life claims are payable in 30 days after they are admitted.

ACCIDENTS TO LIFE OR LIMB, in the FIELD,

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[For particulars apply to the Clerks at the Railway Stations, to the Local Agents,

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W. J. VIAN, Sec.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the *Mining Journal* being the past year being out of print, we recommend that the *Journal* should be ordered in advance on receipt: it then forms an accumulating useful work of reference.

BLASTING-OIL.—Having observed from an advertisement in last week's *Journal* that Mr. Nobel's Nitro-glycerine is to be tested for blasting purposes in this country, I was glad to learn the relative cost of the two systems from the time the test is touched with the burner until the burden falls. A liquid appears to me an awkward material to blast with, especially when the rock is fissured or shaly.

IS SAND A MINERAL.—"J. P." has taken a certain quantity of sand from land which has been let to "R. J.," and who has paid royalty for the sand so carried away. "J. P." states that he has leased the land, and that the lease includes all minerals found in the land, and threatens "R. J." with legal proceedings for encroachment on the street, &c. [Sand is undoubtedly a mineral within the meaning of the lease, and if "J. P." has the right to remove all minerals found in the land, he can remove the sand upon the same terms as other minerals.]

CORNWALL TRADING COMPANY.—A few merchants at Truro, being about to promote a company with 100,000l. capital, to be called up as required, for carrying on the business of "mine merchants," invite any gentleman in or out of the county to sit through the *Mining Journal*, any suggestions calculated to promote the interest of the undertaking, in order that they may be embodied in the prospectus which will shortly be prepared and published.—J. J.

EAST CARM BREA.—The committee of management, and those attending the meeting of this company, have again exhibited themselves in their customary vainglorious light. As I formerly pointed out to you, they about a year ago resolved to discontinue the mine, but they have since been reinstated. Six months ago they again resolved to discontinue the mine, but they have since been reinstated. Six months ago they again resolved to discontinue the mine, but they have since been reinstated.

At the next meeting the confirmation was again postponed; but at the last meeting, 22d inst., the resolution was again rescinded. Surely this is not trifling, and does not disprove the success of the mine where a captain cannot act with any confidence, uncertain whether he is to be dismissed at the next meeting or not. I have nothing to submit to be treated in this way, and from that alone I would argue that the mine should be continued. I observe at the last meeting that he and Capt. Seabrook reported that the sampling would be, "on Wednesday, about 400 tons, of better quality than the last two months;" whereas the real sampling, as appears in the *Journal*, was only 340 tons, making the small error of only 60 tons, or about 150l. in value! Was this accidental, or for the purpose of influencing the meeting to re-elect a man who would produce such great results? I may observe that other companies would report their proceedings to your valuable record of mining events. How is it that the East Carm Brea management never do so? It would be interesting to shareholders at a distance to see their reasons for their vacillations.—A HOLDER OF EAST CARM BREA SHARES.

Erratum.—Under the head of "Notabilia," in the *Journal* of Saturday, Aug. 25, the word "Torrus," read "Terra."

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, SEPTEMBER 2, 1885.

The Board of Trade Returns of the imports and exports of the United Kingdom, for the month, and the seven months, ending July 31, have length been issued; but, as we have often had occasion to remark, their usefulness is much deteriorated by the delay which so often occurs in their preparation, as portions of the information are obtained in other quarters and the general result anticipated. The total declared value of the exports is set down at 88,242,048l. for the seven months, against 92,441,960l. for the same period of last year, which is a decrease of 4,199,912l., but compared with the result in 1883 there is an increase of 12,579,011l., the total amount is 14,138,410l., while in July, 1884, it was 14,394,384l., and in July, 1883, the aggregate was 13,648,840l.

Of the general decrease of 4,199,912l., only 694,495l. is represented by articles identified with the mining interests of the country, there being an increase in four of the eleven heads under which they are classed, amounting to 725,036l., against a decrease in the other seven of 1,410,531l., leaving, consequently, the balance as stated. The total for the seven months is 18,322,492l., against 19,016,987l. in 1884. The increase consists of machinery to the extent of 469,611l.; coal and culm, 173,744l.; hardware and cutlery, 69,434l.; and brass, 12,717l. The decrease comprises iron, to the amount of 1,030,439l.; lead, 170,978l.; steel, 107,343l.; tin-plates, 53,890l.; zinc, 23,411l.; tin unwrought, 18,585l.; and copper 14,335l.

The trade in the precious metals and bullion continues to be in favour of this country. The imports during the seven months are declared 11,551,945l., while the exports were only 7,769,838l., leaving a credit balance of 3,782,107l. The imports were 7,796,959l. in gold, and 8,754,986l. in silver. The exports were 4,280,212l. in gold, and 3,489,626l. in silver.

GUNPOWDER SUPERSEDED—NEW BLASTING OIL.

For some time past experiments have been recorded in connection with the nitro-glycerine, or blasting oil, introduced several months since by Mr. Alfred Nobel, of Hamburg, and described in the *Mining Journal*, and an opportunity has now been afforded to the Cornish miners to observe its behaviour, and form an opinion of its merits for practical purposes.

For stating the results of the Cornish trials, it may be well to briefly describe the nature of the substance, and the claims that have been made for it. The new blasting material is a light yellow oily fluid—a compound of glycerine and nitric acid, its chemical formula being C₃H₅(NO₃)₃, which gives 18 parts of oxygen; and Mr. Nobel claims that, as by combustion, the carbon takes 12 atoms of oxygen, and the hydrogen 5, the complete combustion, leaves a surplus of O₂ only. He states, moreover, that each 100 parts of exploded blasting-oil leaves a residue of—carbonic acid, 58; water, 20; oxygen, 31; and nitrogen, 184=100; and that of a specific weight of the oil is 1.6, one volume produces nearly 1800 volumes of gas—that is to say, steam, 554; carbonic acid, 469; oxygen, 31; and nitrogen, 236=1298 volumes. Weight for weight, the blasting-oil gives a very favourable comparison with gunpowder, which is calculated to produce ordinarily about 250 volumes of cold gas only; the nitro-glycerine would, consequently, appear to be, other things being equal, about 8 times as effective as gunpowder. But Mr. Nobel goes further than this, for he remarks that it is difficult to determine the degree of heat produced by an exploding substance, and that, according to theory, the blasting oil, on account of its complete combustion, ought to develop a more intense heat than gunpowder, and this appears to be borne out by experiment; whence he assumes that the heat developed by the explosion of nitro-glycerine is twice that generated by gunpowder, and from this calculates that nitro-glycerine, compared with gunpowder, possesses about 18 times its power, when volumes are considered, and 8 times its power for equal weight; and that owing to its rapidity of explosion its advantages are still greater.

It appears that the new blasting-oil was first tried by the "Company for Blowing up the Tyskbagar Hills," and Capt. Von Francken, who had five months' experience with the oil, reports the charging is simpler and requires less time, than charging with gunpowder, whilst the work is exposed to no danger, as no tamping is required; the storing requires less precaution than gunpowder; it is of enormous power, admitting small bore-holes, and a concomitant economy in time and labour—being charged with blasting-oil doing the same service as five of the same of filled with gunpowder. The workmen, however, must be cautioned against its poisonous qualities, which, however, may be easily guarded against, since the oil does not evaporate at the ordinary temperature. Similar favourable opinions are expressed by Mr. C. Ph. Carlson, of the Falkenberg Mines, Stora Kopparberg; by Mr. Sv. Spillman, the manager of the Hørrings Iron Pits, near Norrtelje; and by several others, who have thoroughly tested the oil.

In Sweden the invention seems to have received especial favour. Mr. Nobel states that the Nitro-glycerin Aktiebolaget has been established at Stockholm for working the invention in Sweden, where the oil has been used for more than six months, while the consumption of it, he calculates, is more and more declining; it cannot be ignited by simple contact with fire, thus removing all risk of accidental explosion in store. The charge can only be effected under certain circumstances indicated in the directions for using the article. On applying a lucifer match, for instance, to the oil, the latter decomposes without explosion; and on removing the former the fire immediately extinguishes. The article may be stored any length of time without deterioration or loss in weight, and will

phosphorus, or even the metal potassium, decompose it at the ordinary temperature. It detonates when struck with a hammer, but only on the spot where the blow is received, so that a few drops distributed over an anvil produce, by various blows with the hammer, a corresponding number of detonations. It can bear without danger 212° of heat (Fahrenheit), but explodes at about 360°. The chief advantages of the patent blasting-oil are, that the oil, by means of its complete gasification, and the immense expansion resulting therefrom, increased, moreover, by a high specific weight (1.6), admits of a tenfold greater explosive power being introduced into a bore than could be lodged in a bore of the same dimensions with gunpowder; hence a considerable and important saving of labour in boring. Blasting-oil is certainly dearer than gunpowder per pound, but it is cheaper if power instead of weight be taken as standard, since a much smaller quantity will suffice. In practice it has been found that consumers of blasting-oil have spent nearly the same on this article as they did formerly in gunpowder, but had for themselves that important saving of labour, the amount of which varies, of course, according to the hardness of the rock. The quickness of explosion of the oil is so great that the effect is not diminished by rents in the rock; the consequence is that the effect on solid rock, assuming bores to be equal, is nine to ten times greater than that produced by gunpowder, while the effect on fissured rocks is twenty to thirty times greater. Tamping is never required, a shaft of loose sand being sufficient in all cases. Hence accidents in charging are impossible, besides the saving in time. The blasting-oil being insoluble, discharges under water, or in water-carrying rocks, are effected without cartridges; and, as the blasting-oil can only be exploded under certain conditions, and by means of igniters manufactured specially for this purpose, its storing and transport involve no danger.

PURIFICATION OF IRON WITH LEAD.

Reference has been made upon several previous occasions to the discovery of valuable and ingenious processes connected with the manufacture of iron and steel by Dr. Adolphe Gurlt, of Bonn, Prussia, and an additional patent has recently been obtained on his behalf for an improved mode of purifying these metals, and especially of freeing them from phosphorus. In the first place, he introduces into the iron or steel a quantity of metallic lead, or oxides or carbonates of lead, or either of them, for the purpose of purifying the said iron or steel, and thereby improving their quality. This part of the invention may be applied to pig or cast-iron, which is to be puddled either before or during the puddling process, in order to produce wrought or malleable iron or puddled steel, or to iron which is to be refined, or in process of being refined, in common refinery fire or in reverberatory-furnaces, or to pig or cast-iron for casting, or to iron to be treated by the pneumatic process for the production of homogeneous iron or steel, or to the materials used in making cast-steel by the pot or other process of melting. In applying the invention during the puddling process he introduces the lead, or salts of lead by preference, when the iron is in a melted state, and at that stage of the process just when the so-called boiling of the iron begins. The quantity of lead introduced is about 1 lb. more or less, to the usual charge of iron (say, about 5 cwt.), or an equivalent of it in the shape of oxides or carbonates of lead. To secure the good effect of the lead it is essential that they should be most intimately mixed with the molten iron, and at a moderate temperature, which may be regulated by more or less closing the damper of the puddling-furnace in the usual way. The puddling process is then proceeded with in the usual or other convenient way. When the iron is to be used for castings, or when cast-iron is to be improved, it is preferred to introduce the lead into the iron when it is in a melted state, and to bring it by any suitable means as much as possible into contact with the whole of the melted iron, in order to effect as great a degree of purification as possible. With the pneumatic process, it is preferred to add the lead to the iron when in a molten state, either in or when run from the reverberatory-furnace or other melting furnace or cupola, or it may be added in the converting vessel or furnace before or at any stage of the process as may be most desirable. It is preferred, however, to add the said materials to the molten iron when or immediately before the iron begins to boil by the introduction of the blast of air into the converting vessel or pot, or other apparatus that may be used for the purpose. The quantity of metallic lead used is about 6 lbs. per ton of iron, or an equivalent in the shape of oxides or carbonates of lead, according to the quantity of impurities contained in the said iron. The product is then treated in the usual or other convenient way. The quantity of lead will, of course, vary slightly, according to the impurities to be removed.

The mode in which Dr. Gurlt deals with phosphoriferous ores is to produce a highly silicious slag, which shall convert the phosphorus from the crystalline state, in which it exists in the ore, into the amorphous state necessary for its removal. His invention, then, consists in improving the quality of iron by neutralising the injurious effects of the phosphorus contained in the iron, by converting or transforming the said phosphorus from a crystalline to an amorphous state, by the addition into the blast-furnace of such an extra amount of silica as will produce a very acid or silicious slag. It is well known that silica is an essential part of every blast-furnace cinder, but when silica is in marked quantity or excess in iron ore such iron ores have up to the present time been considered objectionable, and, consequently, iron ores containing a large amount of silica have been carefully avoided. He has discovered that by the use or introduction of silica in excess, either in its natural state or in combination or mixture with other innocuous materials in the blast-furnace, in order to produce a very acid or silicious slag or cinder, the said silica is found to transform or convert the phosphorus originally contained in the iron ore from a crystalline to an amorphous state, in which latter condition the phosphorus is readily eliminated from the pig or cast-iron, when being converted into malleable iron or steel, either in the process of puddling or refining or other mode of melting, as well as in the pneumatic process in which iron so treated may be used. There will be considerable variations both in the proportion of silica in excess and also in the mode of treatment, according to the character of the ore and other circumstances.

The exports of RAILWAY CARRIAGES in the first half of this year were valued at 132,921, as compared with 200,604, in the first half of 1864, and 99,271, in the first half of 1863. The number of carriages sent abroad to June 30 this year was 1098, as compared with 1705 in the corresponding half of 1864, and 635 in the corresponding half of 1863.

The value of the BRITISH GENERAL MACHINERY exported to France in the first half of this year was larger than in the corresponding half of 1864, although it was not quite up to the mark of the first half of 1863, the totals having been 170,876, 159,571, and 172,992, respectively. This is a remarkable result, considering that France has carried her mechanical industry to an unprecedented excellence and development.

The value of the TELEGRAPHIC WIRE exported to June 30 this year was 101,935, in the corresponding period of 1864 the total was 105,005, while in the corresponding period of 1863 it was only 54,753. This is a new product of British industry. The value exported yearly since 1852 has been as follows—1853, 72,584; 1854, 81,566; 1855, 163,737; 1856, 80,076; 1857, 302,246; 1858, 224,708; 1859, 742,306; 1860, 201,712; 1861, 214,441; 1862, 320,897; 1863, 317,214; and 1864, 318,825. We suppose the cable just gone to the bottom of the Atlantic will swell this year's figures.

PAUPERISM IN THE MINING DISTRICTS.—The amount expended in the relief of pauperism in Devonshire last year—that is, the year ending March 25, 1864—was 186,077, as compared with 189,944, in 1863–4, showing a decrease of 3867, or 2.0 per cent. last year; in Cornwall, 90,202, against 82,782, showing a decrease of 1808, or 2.2 per cent. last year; in Somersetshire, 168,214, against 168,474, showing a decrease of 260, or 0.2 per cent.; in Gloucestershire, 154,497, against 152,622, showing an increase of 1875, or 1.2 per cent.; in Staffordshire, 145,958, against 152,684, showing a decrease of 6726, or 4.4 per cent.; in Derbyshire, 70,381, against 65,682, showing an increase of 4699, or 7.1 per cent.; in Cheshire, 127,648, against 137,044, showing a decrease of 9396, or 6.9 per cent.; in Lancashire, 856,048, against 905,873, showing a decrease of 49,825, or 5.8 per cent.; in Yorkshire, 450,206, against 458,124, showing a decrease of 7918, or 1.7 per cent.; in Durham, 101,042, against 96,871, showing an increase of 4163, or 4.3 per cent.; in Northumberland, 96,557, against 97,008, showing a decrease of 451, or 0.5 per cent.; in Cumberland, 52,028, against 50,771, showing a decrease of 1257, or 2.5 per cent.; in Monmouthshire, 60,302, against 62,375, showing a decrease of 2073, or 3.3 per cent.; in South Wales, 218,543, against 214,572, showing an increase of 3971, or 1.9 per cent.; and in North Wales, 167,384, against 166,986, showing an in-

crease of 3907, or 1.8 per cent. These districts are not wholly mining localities, of course; but their industrial position appears to have somewhat improved in 1863–4.

FOREIGN MINING AND METALLURGY.

The situation displays a tendency to improvement in Belgium, and some important contracts are stated to be in course of negotiation at Charleroi. At Liège, however, there are no important operations in immediate prospect. At the same time prices are sustained with firmness, because the works have on hand orders which assure them employment for some weeks to come, and because an improvement is anticipated in the situation on the commencement of the autumn. A charcoal-worked furnace has been just extinguished at Roly-lez-Covrin; there are now only three such furnaces in the province of Namur. It is natural, at the same time, that the fabrication of iron with charcoal should languish and give place to coke-worked furnaces. A letter from Liège states that the stock of rich coal accumulated there is almost nil. Coal is sold and forwarded in proportion as the extraction is effected. Prices are very good, and there are no fears of a fall. The ordinary coal of the lower district of the Meuse maintains itself well.

The total quantity of coal raised from Prussian collieries in 1864 was 42,394,500 tons, of which 9,299,000 tons were anthracite. The extraction of last year represented a value of about 4,500,000. The most productive workings are those of Königsgrube and Königin-Louise-grube in Silesia, and those of the Sarrebruck basin. At present the orders received from France by the Sarrebruck collieries are so heavy and numerous that the administration finds it impossible to meet them all. The same administration offers to pay the travelling expenses of workmen who are disposed to come to Sarrebruck for the purpose of working in its coal mines.

The Creuzot works have just concluded a contract with the Southern of France Railway Company for the delivery of 40,000 tons of rails, at 87. per ton in warehouse at Cette. The company reserves to itself the right to carry the deliveries to 65,000 tons on the same terms. A bulletin of the committee of foremasters announces a suspension of working operations on the part of the Nord and Aisne Blast Furnaces and Forges Company. This is the fourth French metallurgical company which has succumbed during the last few months. The first was the Hautmont Company for the manufacture of steel; the second, a concern carrying on forges at Decauville; and the third, the Sambre Blast Furnaces and Forges Company. At St. Dieler the situation maintains its character of firmness, the new prices are accepted, and the demand displays an animation which is rarely remarked at this period of the year. Orders come to hand as well from Paris as from the provinces; they are very pressing, and indicate a *désassortiment* in all the warehouses. For some time past merchants have only purchased from day to day; many of them believed in dull times, and consequently confined their orders to the strict requirements of the day. The improvement which has now manifested itself destroys naturally all hope of a fall, and merchants do not hesitate to lay in supplies. This explains the revival of activity with which the works are at present favoured. The fact should also be recalled that the works which have been for some time past struggling with drought have a restricted fabrication, another element in favour of the maintenance of prices. Charcoal made pig has made 41. 12s. per ton for a small lot of 100 tons (immediate delivery). Irons are quoted without change; rolled make, 9s. 8d. to 9s. 12s., and hammered 10s. 16s. to 11s. per ton. Warrants have been a good deal sought after during the past month, and have become scarce; this is an indication of a good state of affairs. At Marseilles, English pig has made 41. 16s. per ton in warehouse. The consumption of pig in France during the first half-year of 1865 was estimated at 650,778 tons, while the production was 608,000 tons. The difference between the consumption and the production was thus 74,778 tons, or for the whole year 149,000 tons. In 1864 the deficit was 126,000 tons, from which it may be concluded that France does not produce a sufficient quantity of pig to meet her own requirements. The production of iron in 1865 was 411,000 tons, while the consumption was 374,945 tons, showing an excess of production of 36,155 tons. There is thus an excessive production of iron and plates, and this excess has a tendency to increase.

One of the Pommereul blast-furnaces has just been re-lighted. The concern was taken off the hands of the Bank of Belgium by MM. Dehatty, Dabsance, and Jacquemyn. The Pommereul blast-furnaces have witnessed many vicissitudes. They were constructed in 1838–9, and supplied with an engine of 160 horse-power. They remained inactive for several years, and were not re-lighted until September, 1846. They were then the property of the Borne Company, and the minerals employed were obtained from the communes of Cherq, Vaulx, and Ramecroix, near Tournai. By an Act dated Oct. 4, 1845, a new company was formed, under the title of the Pommereul Blast-furnace Company, the capital being fixed at 44,000l., in 1100 shares. The property was ultimately acquired by the Bank of Belgium on the liquidation of the Borne Company. Notwithstanding that the works have had so chequered a career, their position is considered to be favourable, and it is affirmed that they can obtain minerals and labour at a cheaper rate than in the arrondissement of Charleroi.

The French Minister of Public Works has just issued one of his periodical returns on French Railways. The facts stated are not wholly without interest to the iron trade, as they show the regularity with which the work of railway construction proceeds in France. Everything is organised among our neighbours, and in the matter of railways it appears almost certain that for the next seven years the work of construction will proceed at the rate of 500 miles per annum. The new lines on hand, and mapped out, do not sustain the probability at all. The total length of the French railways is 10,000 miles, and the State guarantees 4.45 per cent. upon the capital engaged they will be carried out systematically. The French demand for rails and railway iron and plant can then be calculated with great exactitude.

The foreign metal markets remain without material variation. There is, however, an absence of animation in affairs, and, by consequence, there is great feebleness in the prices of some articles. Copper is neglected, and only changes hands to meet the strict requirements of consumption. At Amsterdam, Drontheim has made 54½ fls. to 55 fls.; English, 51 fls.; and Swedish, 56 fls. At Rotterdam, Drontheim has been quoted at 56 fls., and North American, at 53½ fls. At Havre, Chilean and Peruvian bars have made 78s. 10s. to 79s.; Peruvian mineral (pure standard), 80s.; United States (Baltimore), 87s. to 88s.; Lake Superior, 90s. to 91s.; Mexican and Plata in bars, 74s.; Russian, 88s. to 90s.; old yellow copper, 52s. to 53s.; red ditto, 71s. to 72s.; bronze, 74s. to 74½. At Antwerp, American bars made 108s. to 112s. per ton. On the Dutch market Banca tin has been dealt in at 54½ fls. to 55 fls.; while Buiton has made 54½ fls. At Paris, Banca has been quoted at 97s. to 98s.; Detroit, 94s. to 96s.; and English, 94s. per ton. At Havre the quotation for Banca has been 95s. to 96s.; Detroit, 94s.; Peruvian, 76s. to 84s.; and Peruvian mineral, 40s. to 44s. per ton. For lead the demand is generally insignificant; German, without giving rise to striking affairs, is tolerably well sustained at Berlin and Hamburg. At Rotterdam, Stolberg has made 104 fls.; and German 104 fls. At Paris, Spanish seams have brought 211. 4s.; French, 197. 16s.; Belgian, 211. 12s.; and rolled, 22s. per ton. At Havre, Spanish has made 18s. 12s. to 18s. 16s. per ton. The zinc markets have remained inactive. At Paris rough Silesian has made 22s. 16s., and at Havre 22s. 5s. to 22s. 12s. per ton.

The annexed statement shows the production of the Niederfischbach Mines and Foundries Company during the second quarter of the current year:—Zinc Mines, plumbiferous minerals, 298 tons; Wustefeld ditto, 914 tons; Concordia ditto, 133 tons; Fischbacherwerk Mine of iron and copper, 143 tons; Rother-Adler ditto, 260 tons; Obersterkreutz iron minerals, 30 tons; total, 1778 tons. At the reduction furnaces 22½ tons of worked lead have been produced. The process of distillation yielded in the quarter the following results:—Refined lead, 139 tons; litharge, 79 tons; and fine silver, about 600 lbs. With regard to other miscellaneous matters, we may note that a report just presented to the shareholders in the Belgian General Railway Plant Company states that the closing of the Olchy Works is an accomplished fact. Deliveries of plant, &c., undertaken to be made by the company to the Northern of Spain Railway have been entirely completed; it is considered fortunate that this contract, which has become an onerous one, in consequence of the excessive fall of the obligations of the Northern of Spain, has reached its close, after having been scrupulously executed to the end. The Falmouth Colliery Company, at Courmoules, commenced the payment yesterday (Sept. 1) of a dividend at the rate of 11. 10s. per share. The dividend for 1864–5 of the Montataire Forges and Foundries Company is fixed at 11. 12s. per share, payable half last month and half in January, 1866. The Rive-de-Gier Colliery Company will pay October 15 3s. 4d. per share, in respect to the dividend for 1865. An adjudication of Bessemer steel (330 tons for the State system) has taken place at Brussels. The contract was obtained by MM. Demest and Co., at the rate of 161. 18s. per ton for a first lot of 215 tons, and 151. per ton for a second lot of 115 tons, with delivery at Antwerp. The steel works of St. Severin and Imphy competed, and tendered at the rate of 171. 12s. per ton, with deliveries at Erquennes.

ROYAL CORNWALL POLYTECHNIC SOCIETY.—(From a Correspondent).—This being the Polytechnic week, it may be supposed Cornwall is particularly full of strangers; it is so literally, and that, too, with literary characters. Never, on any occasion, did the London mining interest show stronger; every hotel in every place contains some of these worthies; all the representatives of the best non-dividend mines under the sun, and there are also some few who are representatives of the dividend mines. But to our purpose. As far as Mining is concerned, the ostensible as well as the real object of the Polytechnic Society is a very decided failure; the paltry prizes are not such as to create an outlay for models and plans, whilst the honour of receiving a notice by the Cornwall Polytechnic is so eclipsed by other societies as to render emulation hardly to be excited; so many rival institutions have been established, many, if not most, having the Cornwall Polytechnic as its example, at which higher rewards and more distinctive renown are to be obtained, that we are not at all surprised at the paucity of mechanical adaptations exhibited. If the mining public, the mine proprietors, or even the Duchy officers, were to follow the liberal views displayed by the *Mining Journal*, the show of implements at the Royal Cornwall Polytechnic Hall might be far different; instead of being a mere annual gathering of a few local celebrities, and fewer still of scientific gentlemen, it might become what it was intended to be—a source and a means of benefiting Cornwall's development. I have no objection to ladies' needlework, to the exhibition of precocious abilities in any form, but we do object to such an institution being allowed to dwindle from its noble purpose. I hope the coming year will witness a far more attractive prize list: I know active exertions are about to be made, and that, when applied to, mine owners, mine adventurers, and mine agents, aye, and miners too, will "One and All" respond to the call, especially as regards the higher branches of practical mining en-

gineering. There is plenty of room for improvement in many departments, in dressing ores particularly; then, again, the late melancholy accident at the Devon Great Consols would not only exemplify, but dictate the necessity of an improvement in the man-engine. As I shall have to refer again to the Polytechnic proceedings, suffice it to suggest that a general fund should be opened, and that it will be liberally subscribed to we have little or no doubt.

REPORT FROM NORTHUMBERLAND AND DURHAM.

AUG. 31.—The only notable circumstance connected with the Coal Trade this week is the continuance of the Cramlington strike. This disagreeable business has now settled down into a sour, dull struggle as to who can hold out longest. This is much to be regretted, and, what is very remarkable, the men have not a single word to say against their master, Mr. Potter, the managing owner. We are well assured, indeed, that they can say little against him, as a better master does not exist in the North. There is nothing to be said in this case about confiscation or other grievances, but the men have simply demanded a rise, which the masters cannot give, although they have made some concessions, and it is matter for astonishment that no further progress has been made towards a settlement, as the total amount in dispute is not large. It is to be hoped that some approach to a settlement will shortly be made. An attempt was, indeed, made on Saturday last to bring about an agreement, but without success. A deputation of the men had an interview with the committee of the Steam Collieries Association, but no progress was made, as the committee would not advance beyond their former offer. The men contend that their prices are inferior to those paid at many other works, and made an offer to submit the case to arbitration, but this was not agreed to. The Northumberland men are in a false position, and the sooner they get out of it the better; we have often noticed this. In these days of free trade, instead of the men conferring with their own employers, they have to meet a committee of the whole trade, who can certainly only deal in generalisation; they can know little of particular cases. The labour market in this county will not be in a healthy state until the union of both parties is scattered to the winds.

The works at Wallend and Hebburn are proceeding rapidly forward, so that the drainage of the Tyne collieries will at no distant date be an accomplished fact. Some excitement has been caused by the announcement that a pumping-engine is being constructed abroad for a colliery on the Tyne. I confess I have not been able to ascertain where the colliery is for which this engine is destined; and, at any rate, it is absurd to suppose that any machinery is to be got abroad on account of the inability of the founders or machine-makers of the Tyne to furnish it of sufficient size. Engines and pumps of any size required can be got on the Tyne or Wear; of this there can be no doubt. It is said, indeed, that the pipes for the gigantic pumping apparatus at Wallend are to be got in France, but we cannot at present vouch for this being correct; and, if correct, it has not transpired what the motive is for getting them from abroad.

An explosion took place at the Thornley Colliery on Wednesday last, by which three men lost their lives. A large number of men are employed at those extensive works, and great alarm was naturally felt among them, as the explosion occurred under very peculiar circumstances. The explosion took place in the Low Main seam, and at the bottom of the downcast shaft, where two of the men (brothers) were making some repairs. The men used naked lights, of course, as the shaft is a downcast one, the air current passing direct from the surface down this shaft. The explosion was very loud, and was heard a great distance; and Mr. Bell, the resident viewer, with others, soon descended the pit, when he found Liddell Wallace, who was alive, and he said that the gas exploded at his light; he, however, was so much injured that he died soon afterwards. Search was then made for his brother, George Wallace, and he was found in the Harvey seam, 40 fms. below the Low Main. The third man, Matthew Hewitson, was found in the Low Main, a short distance from Liddell Wallace, and Hewitson was taken home alive. He was, however, so severely scorched that he died on Friday. The inquest was opened on Friday last, but was, after a short sitting, adjourned until Wednesday next. On the same day the pit was examined by Mr. Atkinson, the Government Inspector, in company with Mr. Bell, and four of the men employed in the pit. After this examination, the Inspector drew up some suggestions for the safe working of the pit.

The Thornley Colliery is a very extensive one, having been worked for many years, and several seams have been worked, some of them very extensively. A great number of men have been employed, and a large quantity of coal raised annually. The works have, on the whole, I believe, been carried on with safety, at any rate during the whole course of working very few explosions of gas have occurred. The coal measures in the Thornley district, indeed, are not at all remarkable for producing explosive gas, but are known to produce a good deal of choke-damp, or stythe, as it is called by the miners.

Mr. Thomas Dakers, jun., has been presented with a gold watch, as a testimonial of esteem from the agents and workmen connected with the Willington B. Pit, on his leaving that place for a more important position at Pease's West. Mr. W. L. Gott, viewer, made the presentation.

REPORT FROM SCOTLAND.

GLASGOW, AUG. 30.—The shipments of Pig-Iron from the Scotch ports continue to show a large increase over last year. Week ending Aug. 28, 15,980 tons, against 12,614 tons last year. Total since Jan. 1, 455,536 tons, being an increase of 20,994 tons. This, with the large local demand for both foundries and malleable ironworks, is causing a considerable inroad to be made into the stocks held by makers here, some of which are now very low. Consequently, iron is again being taken out of our public stores, the quantity held there having since the beginning of the year been reduced fully 36,000 tons. Prices to-day are 1s. per ton higher than this day week, with an extensive demand both for shipping iron and warrants. On Thursday, business was done at 54s. 10½d. cash; Friday, 54s. 10d. to 55s. cash; 55s. 1½d. one month, and 55s. 6d. three months—a considerable business done. Monday, market quieter, at 55s. cash, and 55s. 1½d. one month. Yesterday, very animated; fully 10,000 tons sold, at 55s. 1½d. to 55s. 6d. cash; 55s. 3d. and 55s. 6d. one month. To-day, 55s. 9d. and 55s. 10d. cash paid, closing rather easier; sellers, 55s. 9d. cash; buyers, 55s. 7½d.

FOR MANUFACTURED IRON there is little enquiry, compared with a few weeks ago, but prices are firmly maintained. The makers are fully employed, and most of them have good specifications in hand yet to execute. In addition to the contracts for new steamers, noticed in my last, there are further enquiries, with prospects of renewed activity in that trade. Ship-building iron is, in consequence, rather firmer, without any quotable change. The prices are as last reported.—CAST-IRON goods are in request, and the ironfounders are generally very well employed, with a tendency to higher prices for their make.—COALMASTERS are full of orders, and are pressing for delivery. All qualities are in very great demand, and the advance sought by miners will, in all likelihood, be at once conceded. The shipping demand exceeds that of last year by 2500 tons on the week, the figures being this year 29,500 tons against 27,000 tons same week last year.

An explosion of fire-damp took place last night in No. 1 pit, Kirkwood Colliery, Coatbridge. There were thirteen hands in the working at the time, who were all rescued, with the exception of one man, named McGorman, whose head was split, and his body fearfully burned. Death was instantaneous. Other two of the men suffered from choke-damp, but are recovering.

Sinclair's Railway "Wing Signal" is the name given to a new invention of great simplicity, whereby railway passengers may at once communicate with the guard of a train in motion. It is the contrivance of Mr. Godfrey Sinclair, of Edinburgh, and was tried on Saturday last on the Edinburgh and Glasgow line. On the arrival of the train in Glasgow to which this new signalling apparatus was attached, Mr. Sinclair explained his invention to a number of gentlemen interested in the success of the experiment, and one or two members of the local press. The "signal" consists of two sheets of thin iron, of about 24 in. by 12 in. each, painted white. When acting as "signals" they are made to project from the carriage about 18 in. on either side, and are easily discernible during the day to anyone keeping a moderately sharp look-out; and it is proposed to render them visible during the night by lamps, aided by powerful reflectors, placed in such positions as that the light shall fall on the "outspread wings." The communication between the carriages and the "signals" is by means of two light chains running along the roof, and all that the passenger has to do is to give one of them a sudden pull, and the signals at once become visible. The contrivance is exceedingly simple, and its efficiency was very generally acknowledged by the practical gentlemen present. Should it prove on further trial really efficacious, the travelling public will hail the invention as a great boon, and as it can at

proximately as follows:—1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211th, 212th, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311th, 312th, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411th, 412th, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511th, 512th, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th, 548th, 549th, 550th, 551st, 552nd, 553rd, 554th, 555th, 556th, 557th, 558th, 559th, 560th, 561st, 562nd, 563rd, 564th, 565th, 566th, 567th, 568th, 569th, 570th, 571st, 572nd, 573rd, 574th, 575th, 576th, 577th, 578th, 579th, 580th, 581st, 582nd, 583rd, 584th, 585th, 586th, 587th, 588th, 589th, 590th, 591st, 592nd, 593rd, 594th, 595th, 596th, 597th, 598th, 599th, 600th, 601st, 602nd, 603rd, 604th, 605th, 606th, 607th, 608th, 609th, 610th, 611th, 612th, 613th, 614th, 615th, 616th, 617th, 618th, 619th, 620th, 621st, 622nd, 623rd, 624th, 625th, 626th, 627th, 628th, 629th, 630th, 631st, 632nd, 633rd, 634th, 635th, 636th, 637th, 638th, 639th, 640th, 641st, 642nd, 643rd, 644th, 645th, 646th, 647th, 648th, 649th, 650th, 651st, 652nd, 653rd, 654th, 655th, 656th, 657th, 658th, 659th, 660th, 661st, 662nd, 663rd, 664th, 665th, 666th, 667th, 668th, 669th, 670th, 671st, 672nd, 673rd, 674th, 675th, 676th, 677th, 678th, 679th, 680th, 681st, 682nd, 683rd, 684th, 685th, 686th, 687th, 688th, 689th, 690th, 691st, 692nd, 693rd, 694th, 695th, 696th, 697th, 698th, 699th, 70

EPT. 2, 1865.]

character, with local thunder-storms—between the 8th and 11th character, with local thunder-storms, probably in England; 13th and 14th, generally fine; 15th, wind and some rain; 16th, fine; 17th to 20th, generally fine; 21st, wind, rain, and some thunder in places; 22nd, generally fine; 23rd to 26th, unsettled, wind and rain. On the 27th, generally fine; 28th to 30th, unsettled, wind and rain. On the 31st, I do not see there is anything to fear from the weather for the late harvest; the farmers must take advantage of the fine weather to secure their crops.

G. SHEPHERD, C.E.
Author of the "Climate of England."
Newington-street, August 29.

Meetings of Public Companies.

ST. DAVID'S GOLD MINING COMPANY.

The annual meeting of shareholders was held at the London on Thursday, Mr. E. FRANKLIN in the chair. The report of the directors stated that, since their accession to office last year, the company had been engaged in the prosecution of the St. David's gold mine, and that the results of their operations had been such as to justify the shareholders in the belief that the mine was a valuable one. The directors stated that they had been engaged in the prosecution of the mine, and that the results of their operations had been such as to justify the shareholders in the belief that the mine was a valuable one. The directors stated that they had been engaged in the prosecution of the mine, and that the results of their operations had been such as to justify the shareholders in the belief that the mine was a valuable one.

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and a communication made between each level and the opening, so as to drain all the water from the mine. The directors stated that they had been engaged in the prosecution of the mine, and that the results of their operations had been such as to justify the shareholders in the belief that the mine was a valuable one. The directors stated that they had been engaged in the prosecution of the mine, and that the results of their operations had been such as to justify the shareholders in the belief that the mine was a valuable one.

BRITISH SLATE COMPANY.

The second annual meeting of shareholders was held at the offices of the company, Sherborne-lane, yesterday. Mr. J. L. BARNARD (secretary) read the notice convening the meeting. The report of the directors stated that they were gratified in being able to state that the progress of the company during the past half-year has been of the most satisfactory character. The directors stated that they had been engaged in the prosecution of the mine, and that the results of their operations had been such as to justify the shareholders in the belief that the mine was a valuable one.

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in being able to declare a dividend at the rate of 9 per cent. per annum, which, of course, contributed to the general benefit of all concerned.

Upon the proposition of Mr. FARLEY, seconded by Mr. WILDS, the retiring directors were re-elected.

The CHAIRMAN acknowledged the vote, and stated that the directors showed their confidence in the company by the fact that they held among them something like 16,000l. worth of shares.

A special vote of thanks was passed to the secretary, Mr. Barnard, for the zeal and ability with which he continued to discharge the important duties of his office.

The SECRETARY expressed his thanks for this renewed mark of confidence on behalf of the shareholders. He could only say that he felt a deep interest in the success of the company, and he took the present opportunity of congratulating the directors and shareholders, as well as himself, upon the success which had been achieved, although he regarded it as but an earnest of a greater success yet to be achieved. (Hear, hear.)

The meeting was then made special, when certain amendments were made in the Articles of Association.

A vote of thanks to the Chairman terminated the proceedings.

MINING NOTABILIA.

(EXTRACTS FROM OUR CORRESPONDENCE.)

CASTELL CARN DOCHAN (Gold).—The quantity of lode stuff stamped and amalgamated during August was 188 tons. The yield of gold is not yet ascertained. The new stamps work well, and the mine is without alteration.

GWYNFYDD.—Two short levels are being driven, to intersect two of the lodes, which show patches of gold at surface—they will be reached in about a month.

CWMHEISIAN.—Mr. E. Williamson is making a large trial of the lode stuff by stamping, &c., as at Castell Carn Dochan, and continues to find fine gold in the blanket sand. On account of the large quantities of sulphides of lead, zinc, &c., in the lode stuff, amalgamation by Moshermer's machines only obtain about 4 to 5 dwts. of gold per ton of lode stuff. As the stuff by assay contains a larger quantity of gold than this, probably the concentrated sulphides will eventually have to be smelted.

A parcel of TYDDYNLWADIS galena, smelted at the Bagillt Works, contained 88 ozs. of silver to the ton of lead.

NORTH TRESKERB.—Progressing most favourably. At the next ticketing it is expected they will have 150 tons of adventurers' ore, besides a great deal of low tribute, upon which the profits will be large. There are now two levels productive, the 100 and the 110, so that every fathom they drive is producing 10 fathoms of backs, and a great deal of ore is being discovered. These levels appear to be skimming over a great deposit of copper ore, and it is anticipated when they get down to another level, and well under the influence of the eivan, that a great mine will be opened up.

HALLENBEAGLE.—Within the last day or two a very important improvement has taken place in this mine, by the cutting of the north lode in King's western boundary shaft: it is a beautiful lode, 4 ft. wide, and in easy ground, in which they can sink from 4 to 5 fms. a shaft, so that a good piece of ore ground can be quickly laid out. The lode in the eastern part of the mine is the one from which the greater part of the ore is being raised. The other parts of the mine are looking exceedingly well, and the returns must rapidly increase. It is certainly very mysterious, with a mine in this position, and making a good profit, which must soon increase, to see the shares at the present nominal price.

MINING COMPANY OF IRELAND.—Owing to something like a panic having been created amongst the proprietors by unfavourable reports regarding the condition of the Knockmahon Mine, and a consequent serious depreciation in the shares, it was deemed advisable by the directors to respond to a call made upon them, and to hold a special meeting of the company for the purpose of placing before the shareholders the latest information respecting this portion of the company's property, and the precise position of affairs. A meeting was accordingly taken place, and the Chairman has shown clearly that there was not sufficient ground for the unfavourable rumours that had been put forward, most probably by interested parties, the prospects of the mine, instead of being worse, being absolutely rather better than at the last half-yearly meeting. To put a stop, however, to such injurious statements for the future, and for other reasons, it was suggested, as was usual with English companies, to publish in the *Mining Journal* periodical reports of the state of the mines, which suggested to the directors.

There is a Limited Liability Company about to be started under the name of the CORNWALL TRADING COMPANY, with a capital of 100,000l., to be called up as required. This company will be started for the purpose of supplying mines with timber, iron, coal, steel, nails, leather, oil, tallow, candles, &c. There will be a board of directors in London and in Truro, where the business will be first started. Messrs. Williams, Williams, and Co., Truro, and Roberts, Lubbock, and Co., London, are named as the bankers of the company. It is calculated that a net profit on the outlay will be not less than 17 to 20 per cent. Any gentleman in or out of the county who would wish to offer any suggestion in any way calculated to promote the interest of the company will please do so through the *Mining Journal*, as a prospectus will shortly appear before the public.

SOUTH CALLINGTON.—It may be interesting to the public to know that the lode which gives such favourable indications is supposed to be the celebrated Callington lode, which made such immense returns. Whether it is or not, the stratification is precisely similar, and the indications and the state of the lode at present seem to prove that a discovery of great importance is likely to be made at a time not far distant.

WHEAL WILLIAM is situated in Lanivet, rapidly becoming one of the most important tin districts in Cornwall. Operations have been resumed from former workings at a shallow depth, from whence profitable returns were made; and a 22-in. rotary engine, with 16 heads stamps, have been erected, and now in full working. A shaft has been sunk in most favourable ground, going down with which a rich branch of tin has unexpectedly been cut; an event which had it occurred when market operations and sensations were prominent would have put the shares to a high price. A cross-cut is being driven at the 12, to intersect the lode, which will be effected in the course of a few days, and as stated by the well-known inspecting agent, Captain Henry James, of Reistrub, two lodes form a junction at about that depth—a point to be looked forward to as of great importance. From the unusually high produce of the tinstuff, and the quality of tin, as shown in Capt. James's report, this mine, it is considered, cannot well fail to give good profits to the shareholders. The whole of the machinery and work is paid for, and after the middle of next month regular returns of tin will be made.

RENNIE LAXEY.—The last report is highly encouraging, and evidently points to this becoming the next prize in the Laxey district. The shaft is down about 17 fms., and hitherto producing rich stones of lead; it now shows a branch of lead 1 to 3 in. wide, with a little quartz and other favourable accompaniments. The shallow adit cross-cut is also evidently nearing the lode, and the driving of the deep adit will shortly be completed, to cut the lode 20 fms. under the workings at the main shaft. The whole of this set is highly mineralized, and the principal lode is crossed by the rich ore of the Great Laxey course, more especially Dumbell's, which has hitherto proved so rich in the great mine.

THE ASSOCIATION FOR THE PREVENTION OF STEAM-BOILER EXPLOSIONS, AND FOR THE ATTAINMENT OF ECONOMY IN THE USE OF STEAM.

The monthly meeting of the association was held at the offices, Corporation-street, Manchester, on Tuesday, when Mr. L. E. Fletcher, chief engineer, presented his report, of which the following is an abstract:—"During the last two months 380 engines have been examined, and 688 boilers, and 6 of the latter tested by hydraulic pressure. Of the boiler examinations 490 have been external, 37 internal, and 161 entire. In the boilers examined 197 defects have been discovered, 7 of those defects being dangerous." Mr. Fletcher, in concluding his report, says—"Attention may be drawn to the fact that three of the explosions referred to, and possibly the fourth, resulted from weakness of the furnace tubes, and might have been prevented by strengthening hoops, or flanges, or other approved means, while the explosions were attributed in every case to shortness of water. These facts, as well as the character of the evidence generally given at inquests on explosions, show the importance of the association's continuing to point out, on the recurrence of every explosion from collapse, their true cause, and the simple means of prevention. Some slight may be thrown on the tendency to attribute every explosion to shortness of water, rather than to the weakness of the boilers, from the fact that explosions arising from shortness of water are the commonest, and that the explosion arising from weakness of the boiler tubes, whether from their dilapidated condition, or the neglect of suitable precautions in their original construction—are the fault of the boiler owners, and I must say that the majority of explosions that have come under my own observation have been due rather to the neglect of boiler owners than boiler attendants, and until boilerowners view this matter correctly we shall still have a recurrence of these fatal explosions."

FILE MAKING BY MACHINERY.—Reference was made to the formation of an influential company, in July, 1863, for developing Bernot's file cutting patent, and in the *Mining Journal* of Aug. 15, 1863, an illustrated description of the invention was published. The company has just held its second general meeting, and it appears that the manufacture of files has now been commenced. The directors report that the fallacy so industriously propagated, that the company could not produce files by machinery, is disproved by the actual result; even in this early stage of the company's operations files are turned out superior to any that it is possible to produce by hand labour, and at a sixth of the cost of such labour. Another instance is thus added to many, now matters of history in several important branches of industry, of a success in the face of opinions expressed against the introduction of labour-saving machinery. The board have adopted Siemens's regenerative furnace for all heating operations. It being indispensable to use a high and uniform quality of steel to produce files of the first quality, a series of careful experiments to that end have been carried out, and those requisite qualities have been proved to exist in the steel of the Titanic Steel and Iron Company, manufactured under the patents of Robert Mushet. The directors have, in consequence, made a contract upon very favourable terms with that company, including an option to sell their tool and other steels upon commission, which it is believed will largely conduce to the interests of the file company, as the sale of an article that usually accompanies files will be an additional source of revenue, without the expenditure of further capital.

SMELTING IRON WITH GAS.—Much attention is now being directed to an invention, described some time since in the *Mining Journal*, due to Dr. Gurtl, and generally known as the gas-fuel method of smelting, by which the useful portions of the fuel are thoroughly utilised, while all impurities are left behind. The latter advantage is peculiarly applicable to iron and steel making, as the chief impurities in these metals are derived from the fuel. Dr. Gurtl proposes to use a current of gas, of which a small proportion is burnt to give the necessary heat. A small exposure merely reduces, a longer carbonaceous, so that either malleable iron, steel, or cast-iron can be obtained at will. By applying gas fuel to a reverberatory furnace, and blowing in air by pipes over the bridge, a true blow-pipe flame is obtained, by which the highest heat possible is attained, and also, by the regulation of the wind, the atmosphere of the furnace may be kept either neutral, oxidizing, or reducing at will. With such a furnace, Dr. Gurtl hopes to melt steel in large quantities, without injury to its quality. The gas is obtained by burning the fuel in a close, deep fire-box, by means of a blast of air at the bottom.

WELDING IRON.—An invention has been provisionally specified by Messrs. Standly and Prosser, of Cockspur-street, which consists in the employment of hydrogen or its compounds, alone or mixed with oxygen or atmospheric air projected from blow-pipes, for the purpose of welding plates or masses of iron or other metals. They prefer to mix the gases in a reservoir at the base of the blow-pipe.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending August 27 was 12,174l. 10s. 7d.

CAUTION—TO MANUFACTURERS OF TIN AND TERNE PLATES.—The undersigned, being PATENTEE of TWO PATENTS for IMPROVEMENTS in the MANUFACTURE of TIN and TERNE-PLATES, dated and numbered respectively June 6, 1860, No. 1293, and March 19, 1863, No. 738, HEREBY GIVE NOTICE to all Manufacturers of Tin and Terne-plates that they will be LIABLE for ANY INFRINGEMENTS or USE of the SAID PATENTS, or either of them, unless they are protected by license to be duly granted by the said patentees, and which licenses the said patentees are ready at any time to grant upon terms to be agreed upon, upon application to them at the Cockley Iron Works, near Kidderminster.

JOHN SAUNDERS,
COCKLEY, August 12, 1886.

CAUTION—TO TIN AND TERNE PLATE MANUFACTURERS.—ALL PARTIES are hereby CAUTIONED AGAINST USING, without license from the patentees, ANY of the PATENTS, or ANY PARTS of the PATENTS, of EDMUND MOREWOOD, for the USE of ROLLERS in the PROCESS of COATING with these METALS, or for the USE of a RACK ARRANGEMENT, or an APPARATUS WORKING in CONNECTION with ROLLERS in TALLOW or GREASE FLUX, for EQUALISING or FINISHING the COATING. LICENSES for the PROCESSES, which are in successful work, GRANTED, and MACHINES SUPPLIED, by EDMUND MOREWOOD (MOREWOOD and ROGERS), STRATFORD, LONDON, E.

The dates of E. MOREWOOD's patents above referred to are as follows:—
April 4, 1859 No. 445 January 14, 1863 No. 1293
October 3, 1859 No. 235 August 7, 1863 No. 738
December 5, 1860 No. 295 December 24, 1864 No. 297

IMPROVED APPLICATION OF WATER-POWER.
THE TURBINE—MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for 12 years, with complete success, in MANUFACTURING their IMPROVED TURBINES, and can recommend them with confidence.

This machine is applicable to all practicable heights of fall and quantities of water, giving a much higher percentage of power than any other description of water-wheels. On low falls it has the additional advantage of not being affected by floods or back-water, and it is particularly well adapted for any falls where the quantity of water is variable.

Further particulars on application, also references to turbines now at work on a great variety of falls.

TO MAKERS AND USERS OF COKE.—GOOD HARD COKE FROM WASTE SLACK.

HICKLIN AND PARDOE'S IMPROVED COKE OVENS.—This invention (secured) enables the MANUFACTURE of GOOD HARD COKE, suitable for blast-furnaces, cupolas, &c., from STAFFORDSHIRE or other non-bituminous FINE SLACK (by the admixture of a small proportion of bitumen), to be carried on in a MOST EFFECTIVE and PROFITABLE MANNER, and WITHOUT THE USUAL WASTE. It is applicable to all kinds of fine slack.

For particulars and terms, apply to COLLIS BROTHERS, mining engineers, Stourbridge.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS.

MANUFACTURERS OF PORTABLE and FIXED STEAM ENGINES, MACHINERY for PUMPING, HOISTING, GRINDING, SAWING, &c., ENGINES for STEAM CULTIVATION, SELF MOVING ENGINES for COMMON ROADS and AGRICULTURAL PURPOSES GENERALLY.

STAMP END WORKS, LINCOLN and 78, LOMBARD STREET, LONDON.

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THE BEST STEAM THRASHING MACHINERY MADE.

BLASTING.

AS NOW ADAPTED BY LENK'S PROCESS

G U N C O T T O N

IS THE CHEAPEST AND SAFEST EXPLOSIVE, AND FREE FROM SMOKE.

Prices and directions for use on application to the Manufacturers, THOMAS PRENTICE AND CO., 173, FENCHURCH STREET, LONDON, E.C.

MANUFACTORY, STOWMARKET, SUFFOLK.

THE CORNWALL BLASTING POWDER COMPANY.

ST. ALLEN POWDER MILLS, TRURO, beg to INVITE ATTENTION to their WATERPROOF SAFETY BLASTING CARTRIDGES, which are supplied in various lengths, at reasonable prices.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON AND CO., PENHALICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1881, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE upon warrant that it will prove equal to, if not better than any to be procured elsewhere.

THE CLUTCH SAFETY CAGE, IMPROVED.

The improvement consists in its having only a single spring, which is strong enough to take the lift of the loaded cage; to overhaul the broken rope, however distant the fracture may be; and yet so conditioned that it cannot bring the clutches into play till the rope is broken. It is an ordinary carriage spring, and can be replaced, when needed, at any coach-work.

Makers of cages, or inventors, who may wish to compare the safety clutch with their own improvements are respectfully informed that liberty to do so will be granted to them on easy terms.—Apply to the patentee, ROBERT AITKEN, 2, Fettes-row, Edinburgh.

Swan Rope Works.

G A R N O C K, B I B B Y, A N D C O., CHAPEL STREET, LIVERPOOL.

MANUFACTURERS OF FLAT and ROUND IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.

MANILA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER, and THIRTY PER CENT. CHEAPER than Russian hemp rope.

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By WILLIAM RICHARD, Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 36, Upper Parliament-street, Liverpool.

Truro: Heard and Son, London: Longman and Co., the office of THE MINING JOURNAL, 26, Fleet-street; of the author, and of all booksellers.

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Containing upwards of Five Thousand Nautical, Steam, and Shipbuilding Terms, Commercial and Scientific Expressions, &c., in Ten different Languages; with a Key to the pronunciation of each language. By Dr. REEHORST.

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By JOHN BOWER, Esq., D.C.L., Barrister-at-Law, Managing Director of the Snowdon Slate Quarries Company (Limited).

London: Published at the MINING JOURNAL office, 26, Fleet-street, E.C., and sold by all booksellers and newsgate.

THE PRACTICAL MECHANICS' JOURNAL for September

(Part vi., third series, price 1s.), with plate engraving of "Hydrostatic Press for Baling Cotton," and thirty-two wood engravings. Original Articles on Mechanical Fitting of Iron; the Dublin Exhibition, 1885; Production of Useful Metals in the United Kingdom; Cornish's Excavator; American Patent Law; and Cotton Pressing.

Recent Patents: Flocking Fabrics; Johnson; Feeding Apparatus for Carding Machines; Wallis and Cooper; Autographic Stamps; Lord John Hay. Reviews of Books, Correspondence, Scientific Societies, Monthly Notes, Marine Memoranda, List of Patents, &c.

London: Longmans, Paternoster-row; Editors' Office (Offices for Patents), 47, Lincoln's Inn-fields.

SALOM'S NEW OPERA and FIELD GLASS, and the

RECONNOITERER GLASS, price 10s. 10d., sent free.—This tourist's favourite, through extraordinary division of labour, distinctly shows small windows 10 miles off, landscape at 20 miles, Jupiter's moons, &c.—The MARQUIS OF CAMARHEN: "The reconnoiterer is very good."—The EARL OF BRADSLANE: "I find it all you say; and wonderfully powerful for so very small a glass."—Rev. Lord SCARSDALE "approves of it."—Lord GIFFORD, of Ampney: "Most useful."—Lord GARVAOH: "Remarkably good."—Sir DIOBY CAYLEY, of Brompton: "It gives me complete satisfaction, and is wonderfully good."—Sir W. H. FIELDER: "I do not think it can be surpassed; it gives great satisfaction."—CAPTAIN SNEYDY, Royal Small Arms Factory, Enfield, "found it effective at the 1000 yards range."—F. H. FAWCETT, of Farnley Hall, Esq.: "I never before, although I have tried many, met a glass combining so much power for its size with so much clearness."—The FIELD: "We have carefully tried it at an 800-yard range, and found it fully equal to any of those present, although they had cost more than four times its price."—Notes and Queries: "What intending tourist will now start without such an indispensable companion?" The celebrated HYTHE GLASS shows bullet-marks at 1200 yards, and men at 3½ miles; price, 31s. 6d. All the above glasses, respectively bearing the registered trade marks, "Salom," "Reconnoiterer," and "Hythe," are only to be had direct from SALOM and Co., 98, Princes-street, Edinburgh. A few hours will carry a glass to almost the remotest town in the United Kingdom.

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RAILWAY DEBENTURES AND BONDS, COLONIAL SECURITIES, FOREIGN BONDS, AND BRITISH MINES.—Messrs. TREDINNICK AND CO., of 78, LOMBARD STREET, LONDON, E.C., may be consulted confidentially as to the eligibility of all bond and share investments. A selected list forwarded on application.

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In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE NORTH DOLCOATH MINE.

TO BE SOLD, pursuant to an Order made in a Cause Lexington v. Appleton and Others, dated the 5th day of August instant, at the Registrar's Office, Truro, on Wednesday, the 13th day of September next, at One o'clock in the afternoon.

15 (5000ths) PARTS or SHARES of the defendant Thomas Abrahams,
10 (5000ths) PARTS or SHARES of the defendant H. J. Bauman,
10 (5000ths) PARTS or SHARES of the defendant Spencer Lynn,
150 (5000ths) PARTS or SHARES of the defendant Camille Francois Picard,
10 (5000ths) PARTS or SHARES of the defendant William Garrod,
30 (5000ths) PARTS or SHARES of the defendant William Jones, and
25 (5000ths) PARTS or SHARES of the defendant James White,
Or and in the said MINE.

HENRY SEWELL STOKES, Solicitor, Truro
(Agent for Frederick William Seall, 1, George-street, Mansion House, London, Plaintiff's Solicitor.)

Dated Registrar's Office, Truro, August 30, 1886.

In Chancery.

VICE-CHANCELLOR WOOD.

IN THE MATTER OF THE COMPANIES ACT, 1862, and in the MATTER OF THE CAPPAUGH MINING COMPANY (LIMITED).—THE CAPPAUGH COPPER MINE, in the county of CORK, in IRELAND.—FOR SALE, BY PRIVATE CONTRACT, under an Order of the High Court of Chancery, in this matter, of date the 9th day of August, 1886, the INTEREST of the above-named company in this MINE, and in the powerful and perfect ENGINES, MACHINERY, PLANT, and STORES, now in full work. The mine is held by the company under an indenture of underlease, dated the 29th day of September, 1862, for a term of which 14 years are unexpired, at a rent certain of £50 and royalty of 1-16th of sale moneys, clear of all deductions, or 1-16th of the minerals raised, with a surface rent of £2 10s. per acre. The underlease contains a covenant for renewal at option of lessee, without fine, for the further term of 21 years. The workings consist of three large shafts, of which the skip shaft has been sunk below the 94 fm. level, which is the deepest of nine levels that have been driven. Each level has yielded fairly, and the value has considerably improved in depth according to the mine captain's latest report. Another sinking tank up is expected to bring the south nearly to join the north part of the lode, when a still greater improvement is looked for.

The first sale of ore by the company was made at Swanes, in June, 1863, and sales have since been made amounting to 451 tons net, yielding £3871 nett at Swanes. The late sales of ore average £3 11s. per ton nett at Swanes. The ventilation is excellent, and the water moderate. It may fairly be assumed that the mine can now be immediately worked to a considerable profit. In the locality of the mine skilled labour is abundant. The inhabitants are industrious and orderly, and provisions are cheap. The mouth of the mine is on the brow of a hill, half a mile from the sea, and the ore is shipped in a cove, which will admit a vessel of 100 tons. Over £20,000 has been expended by the company in the purchase and erection of first-class machinery, including a 50-inch double-cylinder pumping engine and buildings, of capacity for deep workings in unwatering and developing the mine, and in the formation of a railway and harbour for shipping ore. The plant, which is first-class, includes double-acting whelm and crushing engine, powerful crushers, dressing-floors, and every requisite (save timber and small iron) for carrying the mine to a depth of about 300 fms., and for preparing the ore by coarse or fine dressing for market.

Tenders will be received by the official liquidator, FREDERICK WHINNEY, Esq., No. 5, Serle-street, Lincoln's Inn-fields, on or before Tuesday, the 19th day of September, 1886. Should the official liquidator consider the tenders insufficient, he will, on or before Saturday, the 23d September, intimate by letter to all who have tendered the terms and reserve price on and at which he is prepared to sell, and further tenders will thereafter be received until the 29th September, 1886. The official liquidator reserves the right to accept any tender, whether original or substituted, as he shall ultimately consider most advantageous for the company, or to reject all tenders made. The original lease and underlease, and a full report on the mine, may be seen up to the 19th August, 1886, with working plans and inventory of plant, &c., may be seen and all particulars as to the title and an alleged incumbrance, and the conditions of sale, ascertained, and orders to inspect the mine and workings obtained on application to the official liquidator, to Messrs. TUCK and WALF, 17, Lincoln's Inn-fields, solicitors for the official liquidator.

In Chancery.

IN THE MATTER OF THE JOINT-STOCK COMPANIES

WINDING-UP ACTS, 1848 and 1849, and the JOINT-STOCK COMPANIES WINDING-UP AMENDMENT ACT, 1857, and in the MATTER OF THE SOUTH LADY BERTHA COPPER MINING COMPANY.—UPON the application of the Official Manager of the above-named company, and upon reading the London Gazette of the 11th and 14th July, 1885, the Times newspapers of the 12th and 15th July, 1885, the Morning Journal newspaper of the 12th and 22d July, 1885, of the affidavits of Frederick Whinney, sworn on the 5th day of July, 1885, and the schedules or exhibits respectively marked A, B, and C, therein referred to, and the affidavit of John Richard Bowden, sworn on the 25th day of July, 1885, and the exhibits A and B, respectively referred to, and now on the file of proceedings in this matter, it is PEREMPTORILY ORDERED that a CALL of ONE POUND PER SHARE be made on all the contributories of this company, and it is peremptorily ordered that each of such contributories do, on or before the 15th day of September, 1886, pay to Robert Palmer Harding, the Official Manager of the said company, at his office, No. 3, Bank-buildings, in the City of London, the balance (if any) which will be due from him after debiting his account in the company's books with such call.

HENRY LEMAN, Chief Clerk.

R. P. HARDING, 3, Bank-buildings, City, and 5, Serle-street, Lincoln's Inn, Official Manager.

W. BARRETT, 3, Bell-yard, Doctors' Commons, Solicitor.

Saturday, the 5th day of August, 1886.

In Chancery.

BRECONSHIRE—THE IMPORTANT PROPERTY, known as the PALLEG COLLIERY, in the parish of YSTRADGYNLAIS.

MESSRS. PRICE AND CLARK WILL SELL, BY AUCTION, at the Cameron Arms, Swanes, on Friday, Sept. 16, at Twelve for One, in One Lot, pursuant to an order of the High Court of Chancery, made in the Matter of the Companies Act, 1862, and of the Felling Anthracite Coal and Iron Company (Limited), with the approval of the Master of the Rolls, the IMPORTANT PROPERTY known as the PALLEG COLLIERY, situate in the hamlet of PALLEG, in the parish of YSTRADGYNLAIS, in the county of BRECON, together with the capital STEAM ENGINE, and all the expensive PLANT, MACHINERY, and MATERIALS for working the mine, which is now in full operation.

The property is leasehold, and held for a term of 42 years, from 25th March, 1862, at a dead rent of £70 per annum, and subject to a royalty of 1s. 1d. per ton (7d. for coal and 6d. for ironstone) on the nett amount of coal and ironstone raised.

Printed particulars and conditions of sale may be had at the principal Inns in Swanes and Neath; and in London of JONES TUCKER, Esq., solicitor, 28, St. Swithun's-lane, City; of GEORGE SCOTT, Esq., the official liquidator, 2, Bond-court, Walbrook; and of Messrs. PRICE AND CLARK, 48, Chancery-lane.

NORWAY.

VALUABLE and IMPORTANT SILVER MINES, in the ANNA SOPHIA MINING DISTRICT of NORWAY, together with all the MACHINERY, STAMPING MILLS, PLANT, &c. Well worthy the attention of capitalists and others.

MR. MARSH WILL SELL, BY AUCTION (by order of the liquidators of the East Kongberg Native Silver Mining Company of Norway, Limited), unless previously disposed of by private contract, at the Guildhall Coffee-house, on Thursday, September 7, 1886, at Twelve o'clock, in One Lot, the VALUABLE SILVER MINES in the ANNA SOPHIA DISTRICT of NORWAY, on the eastern side of the River Logen, a few of the principal of which are the ANNA SOPHIA, RAMSDUD, RAMSVIG, and NEULU GLUCK, which are in most complete working order, and adjacent to the Government Mines of Kongberg. There is an abundance of water-power, cheap timber, and mining labour may be obtained at a moderate rate.

Particulars may be obtained of Messrs. SHEPHERD and RILEY, solicitors, 38, Moorgate-street; of GEORGE GRANT, Esq., 123, Fenchurch-street, E.C.; of Messrs. CARTER and HARPER, accountants, No. 7, Skinner's-place, Sils-lane; and at Mr. MANN'S office, 2, Charlotte-row, Mansion House.

ESKDALE, NEAR WHITBY.

VALUABLE FREEHOLD ESTATE and MINERAL PROPERTY.

MR. FLINTOFF WILL SELL, BY AUCTION, at the Angel Hotel, Whitby, on Wednesday, Sept. 20, 1886, at Three o'clock in the afternoon precisely, the VALUABLE FREEHOLD ESTATE of HAGG HOUSE and HOWLET HALL, in the township of Uggah, in the parish of Whitby, in the North Riding of the county of York, containing 255 0 1 1/2, in a ring fence. The Estate is let in two farms to yearly tenants, has good substantial buildings, is in a good state of cultivation, and situate within two miles of Whitby, in the beautiful valley of the Esk.

The VALUABLE IRONSTONE contained in the property can be advantageously worked, as the Whitby and Pickering Railway passes through the Estate.

The property may be viewed on application to the tenants, and plans and particulars may be obtained of the Auctioneer; of Mr. BOULTON, land agent, Whitby; Messrs. WALKER, HUNTER, and GRAY, solicitors, Whitby; and of CHRISTOPHER L. BRADLEY, Prior House, Richmond, Yorkshire.—August, 1886.

PRELIMINARY ADVERTISEMENT.

BOSCAWEN MINE, NEAR BLACKWATER, CORNWALL.

MR. BURGESS WILL SELL, in the month of September, all the VALUABLE MACHINERY on the above-named mine, viz.:—One bright full size 70 in. ENGINE; THREE 12 ton BOILERS; 10 in., 20 in., 20 in. pumps; pick line, 10 in. and 8 in. STEAM WHIRM and 8 ton BOILER, STEAM CAPSTAN, and CRUSHER; 2 balance bins, 2 sets of lofty shears, 2 angle bins, 3 and 9-16 chain, sheds, plunger poles, brass-lined working barrels; 2 ft., 4 ft., and 6 ft. shovels, and flat-rod pullers; iron and wood flat-rod, bridge and flat rail iron. Sundry other materials will appear in future advertisements.

Dated Barncoose, Redruth, August 23, 1886.

VALUABLE COLLIERY PROPERTY, FOREST OF DEAN, GLOUCESTERSHIRE.—TO BE SOLD, BY PRIVATE CONTRACT, OR LET ON ROYALTY, or at a fixed rent, the NEW BRIDGE ENGINE COLLIERY, situate at NAILBRIDGE, in the FOREST OF DEAN, on the turnpike road from Coleford to Mitchell Dean, comprising all the ungotton COAL in the COLEFORD HIGH DELPH SEAM and other veins, in an area of 90 acres, together with the pit shafts, WINDING and PUMPING ENGINES, and other colliery erections and plant connected therewith.

The REDDINGS LEVEL COLLIERY, situated at Ruarden, comprising the ungotton COAL in the COLEFORD HIGH DELPH SEAM, in an area of 39 acres.

The STANDFAST COLLIERY, at Moseley Green, comprising about 25 acres.

For further particulars, and to treat, apply to Messrs. ASHBY and LEONARD, solicitors, Bristol; or Messrs. COCKERT and SON, mineral surveyors, West Bromwich.

MERIONETHSHIRE MINING SETTS FOR SALE.—IRON SLATE, AND MANGANESE.—Or shares in either of the above, situate near railway. The iron and manganese of rich quality, and abundant at surface. The slate sets near prosperous quarries.—Address letters Mr. G. E. FETTER, Dolgelly.

IMPORTANT TO TIMBER MERCHANTS, BUILDERS, CONTRACTORS, &c.
THE VALUABLE MACHINERY AT THE CITY SAW MILLS,
DIGLIS, WORCESTER.

TO BE SOLD, BY TENDER, THE ENTIRE PLANT of the

above WORKS, consisting of THREE HIGH-PRESSURE STEAM-ENGINES, upwards of 100 horse power; 12 circular saw benches, with saws, varying from 2 ft. 6 in. to 4 ft. 6 in., with straps, &c., complete; 1 circular 6 ft. rack saw, complete; 1 frame, 1 hand saw, 3 wood turning lathes, 3 machines for making railway wheels, 1 machine for making and compressing railway keys, 1 key compressing machine, 1 trencal compressing machine, vines, benches, spade tree bending machine, &c.; an apparatus for steaming timber, and a two-knife chaff engine; 1 valuable and powerful timber frame, to cut a log 36 in. square, driven by a 10 horse power steam-engine; 1 powerful fixed crane, and a portable ditto; office fittings, including desks, large iron repository, copying press, &c. Also blacksmiths, wheelwrights, and engine-fitters' tools.

The purchaser of the plant will be required to take for a term (to be agreed upon) a rental of £70 per annum, the yards, sheds, and erections upon the premises, from 1st day of November next.

The above offers an opportunity for the employment of capital seldom to be met with, as there is a large and valuable connection attached thereto with railway and carriage companies, &c. A considerable trade is also done in packing-cases, chairs, &c. To inspect the plant, apply on the premises. The premises are well situated for business, and command a capital wharfage to the canal.

The tenders to be sent in to the resident assignee, FRANCIS SPOONER, Esq., Old Bank, Worcester, on or before the 28th September next.

MATERIALS FOR SALE, BY PRIVATE CONTRACT, at EAST MARGARET MINE, LELANT, near the St. Ives Road Station, &c.

A 37 inch CYLINDER PUMPING ENGINE.

A 30 inch CYLINDER STAMPING ENGINE, 8 feet stroke, with 22 horse, complete—a first-class machine; with 9 ton BOILER.

A 20 inch CYLINDER WINDING ENGINE, 4½ ft. stroke—a first-class machine; with 9 ton BOILER; cage and fly-wheel complete.

One 8-arm CAPSTAN complete, 150 fathoms, 8 to 13 inch pitwork, with matching pieces, H-pieces, clack-seat pieces, poles, stuffing-boxes, glands, &c., complete, all in good working condition.

60 fms. 3¼ in., 30 fms. 1½ in., and 20 fms. 1½ in. iron pump rods; 3 horse whelm complete; 250 fms. 1 in. horse whelm chain; shaft tackle, with 12 ft. shavers; 12 ft. shavers; 25 fms. new tram rods; wheel and iron tram wagons; large quantity of damage and other bolts, of various sizes and lengths; 2 to 3 tons fagot iron scrap plates; 4 to 5 tons scrap and old iron; several lots new iron and steel.

32 hand and patent frames, with launders and valves complete; 20 26 to 45 in. the knives; trunks, buddies, sheds, and dressing tools, complete.

SMITH'S SHOP.

2 36-inch bellows; anvils, vice, screwing stocks, mandrill, smiths' and miners' tools, complete. The account-house furniture, comprising tables, chairs, cooking apparatus, utensils, knives, forks, dinner set, tea set, &c.

For further information, apply to the agents on the mine; or to Messrs. Hines and Son, Albert Stores, Penzance.—August, 1886.

MINE AND MATERIALS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, THE RESIDUES OF THE SEVERAL TERMS of the

EXISTING SETTS (of which 17 years are now to come and expire) of and in the VALUABLE TIN MINE, in which there are six or seven known lodes, and in which a mine is situate in the parish of Uggah, in the North Riding of the county of York, from east to west about half a mile, and in width from north to south upwards of a quarter of a mile, and adjoins Whael Mary and Whael Reeth being the next adjoining mines, from the whole of which large profits have been realized. There is a cross-course in all the above mines, which runs from north to south, and passes through the middle of the mine offered for sale, and the tin in all the above adjoining mines has been chiefly made by the junction of whetstone, or porphyry and granite.

The mine for sale has been sunk upwards of 75 fathoms, and levels driven at various depths, and tin raised by such workings; and by sinking the shaft another 10 fathoms, and driving the levels east and west, it is fully expected that in a short time a dividend mine similar to those adjoining will be realized.

With the interest now subsisting in the several sets, the whole of the machinery at the mine will be included for sale, and these comprise a DRAFT ENGINE, 24 horse, with 9 ton BOILER; a WINDING ENGINE, 20 in., 7 to 8 ton BOILER; 40 fms. of 75 fms. of pitwork, one portion 8 in., and the other 7 in. pumps; whelm chain, shavers, skip and tram wagons, and materials of various descriptions, with sundry old and new iron, smiths' tools, account-house furniture, &c., the whole of which will be found in good order and condition; and the speculation is one, it is believed, that will require only a small further outlay to secure a permanent dividend-paying mine.

The winding engine or steam whelm, being situate in an abandoned portion of the sett, has not been, and will not be, required for future workings, and therefore may be sold at once.

Reports by highly respectable agents may be seen if desired, and any information obtained; and tenders for the purchase of the whole, or for the whelm only, will be received until 13th September next, by Mr. WILLIAM RICHARDS, 17, Regent-terrace, Penzance.

Dated August 13, 1886.

REAL TERRA COTTA CLAY—TO CLAY CONTRACTORS, R CLAY AGENTS, AND POTTERY MANUFACTURERS.—A bed of very fine terra cotta clay having been discovered, the full extent of it has been submitted to analysis at the Geological Museum, and the following is the result:

Metallurgical Laboratory, 28, Jermyn-street, July 4, 1886.

The analysis of the air-dried clay gave as follows:—

Composition per cent.

Silica 57.88

Alumina 20.25

Peroxide of iron 7.75

Oxide of manganese traces

Lime 1.97

NICHOLLS, WILLIAMS, AND CO. ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on
PATENT AND NEWEST PRINCIPLES. We beg more especially to call the attention
of the public to the manufacture of our BOILERS, which have been tested by most of
the principal engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both
in iron and steel. HAMMERED IRON AND HEAVY SHAFTS OF ANY SIZE.
We make of the best iron, and warranted. RAILWAY WORK OF EVERY
DESCRIPTION.
We have FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS,
Williams, and Co. have had 20 years' experience in supplying machinery to foreign
mines, and employing experienced workmen to erect the same, where required.
NICHOLLS, WILLIAMS, and Co. have always a LARGE STOCK OF SECOND-
HAND MINING MATERIALS in stock, and at moderate prices.

PATENT FLEXIBLE TUBING
AND BRATTICE CLOTH FOR MINES,
MANUFACTURED BY
ELLIS LEVER,
PATENTEE,
WEST GORTON WORKS, MANCHESTER.

TAVISTOCK IRONWORKS AND STEEL ORDNANCE
COMPANY (LIMITED).
(LATE GILL AND CO.)
ENGINEERS, IRON AND BRASS FOUNDERS,
MANUFACTURERS OF

STEAM ENGINES, BOILERS, AND MACHINERY OF ALL KINDS.
SHOVELS, EDGE TOOLS, AND EVERY DESCRIPTION OF CAST
AND HAMMERED IRON FOR MINING, MANUFACTURING,
RAILWAY, OR AGRICULTURAL PURPOSES.
Machinery sent to all parts of the world.
Foreign mining companies supplied on liberal terms.

RAILWAY CARRIAGE COMPANY (LIMITED),
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.

MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, AND EVERY
DESCRIPTION OF IRONWORK.
Carriages and wagons built, either for cash or for payment over a
period of years.

RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES, 5, STOREY'S GATE, GREAT GEORGE STREET,
WESTMINSTER.

THE BEVERLEY IRON AND WAGON COMPANY
(LIMITED).
MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, WROUGHT
IRON CARRIAGE AND WAGON WHEELS, AXLES, HAMMERED
AND HEAVY SMITHS' WORK FOR ENGINEERS, &c. BRASS AND IRON
WORKERS, MAKERS OF PORTABLE FARM RAILWAYS, TURNABLES,
WAGONS, SWITCHES, &c. AGRICULTURAL MACHINISTS. MANUFACTURERS
OF FIELD, ROAD, AND BARN IMPLEMENTS, PATENT LORRY,
AND CARRIAGE WHEELS, WITH WOOD OR IRON NAVES. REAPING
MACHINES, CLOD CRUSHERS, CORN MILLS, &c. SAW MILL PROPRIETORS.
GENERAL TIMBER CONVERTERS FOR HOME AND FOREIGN RAIL-
STATIONS, BARRACKS, EXHIBITIONS, &c.

IRONWORKS, BEVERLEY, YORKSHIRE.
JAMES DEWHIRST, Sec.

BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for
SALE, by immediate or deferred payments. They have also wagons for hire
of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping
Wagons in working order maintained by contract.

EDMUND FOWLER, Sec.
OFFICES, 3, NEWHALL STREET, BIRMINGHAM.

BASTIER'S PATENT CHAIN PUMP,
APPLICABLE TO ALL KINDS OF MINES, DRAIN-
AGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of
mines, engineers, architects, farmers, and the public in general,
to his new pump, the cheapest and most efficient ever
introduced to public notice. The principle of this new pump
is simple and effective, and its action is so arranged that acci-
dental breakage is impossible. It occupies less space than
any other kind of pump in use, does not interfere with the
working of the shafts, and unites lightness with a degree of
durability almost imperishable. By means of this hydraulic
machine water can be raised economically from wells of any
depth; it can be worked either by steam-engine or any other
motive power, by quick or slow motion. The following
statement presents some of the results obtained by this hy-
draulic machine as daily demonstrated by use:—

1.—It utilizes from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 per cent. less
than the usual pumps employed for mining purposes.
3.—It occupies a very small space.
4.—It raises water from any depth with the same facility
and economy.

5.—It raises with the water, and without the slightest in-
jury to the apparatus, sand, mud, wood, stone, and every ob-
ject of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or at-
tention.

BASTIER'S PATENT CHAIN-PUMP may be seen daily
in operation at Messrs. SAMUEL BROTHER AND CO.'S Patent
Rice Starch Works, Bromley-by-Bow, London, E. Cards of
admission to be had on application to the inventor and pa-
tente, Mr. J. U. BASTIER, C.E., 143, Gower-street North,
London.

J. U. BASTIER, sole manufacturer, will CONTRACT to
ERECT his PATENT PUMP at his OWN EXPENSE,
GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES
therein, mining proprietors, and others, for the USE of his INVENTION.
OFFICES, 143, GOWER STREET NORTH, LONDON.
March 21, 1865. Hours from Ten till Four. J. U. BASTIER C.E.

CLEVELAND'S WALNUT POMADE—IN CHANCERY—
ACTION.—Cleveland v. Held, Cleveland v. Norton. Whereas a bill praying
injunction restraining the defendants from pirating the plaintiff's labels and selling
imitations of his pomade, under the name of "Walnut Extract," has been
an interim order granted by Vice-Chancellor Stuart; all parties are hereby
notified that they will be prosecuted for selling colourable imitations aforesaid.

JAMES GRAYSON, 13, Great Ormond-street, Plaintiff's Solicitor.
Warrington-street, agent for Cleveland's Walnut Pomade, and all chemists.

GRAY HAIR—CLEVELAND'S WALNUT POMADE will
change gray hair to the original colour, darkened or light hair without staining
it is not a dye, and does not injure the hair as dyes do. It gives it a rich
brunette, and nourishes its growth. An ordinary pomade is inferior to
it, and although established 20 years no one has equalled it although many have
tried to imitate it. Sold in pots at 1s. 6d., 2s. 6d., and 3s. 6d., by all the London
and provincial perfumers.—Barclay, 95, Farringdon-street, wholesale agent. In
bottles, 1s. 6d.

GRAY HAIR AND BALDNESS.—LANARDO'S AMMO-
NACAL POMADE will change gray hair to its original colour, gradually
removing the white, and effectively removing baldness. Before purchasing send one
penny for the chemical properties. Sold in sample pots at 1s., and ordinary
pots at 1s. 6d. G. Sutton and Co., chemists, Store-street, Bedford-square.

SKIN.—CLEVELAND'S SKIN POWDER gives to the
complexion, arms, and all parts of the body a rich delicate appearance, cools
the skin, and stimulates the skin to a healthy action. In packets at 6d., 1s., and
2s. 6d. Order Cleveland's skin powder of your chemist or perfumer, and don't take
any other.

PERFUMES, FITS, AND NERVOUS DISEASES yield to the new
medication, PERCHLORATE OF POTASSA, which acts by oxydizing the blood
and stimulating the vitality of the nerves. An entirely new chemical, discovered,
and exclusively prescribed by the late Dr. M. Hall; it acts as an alternative,
and stimulating tonic, supplying the blood with oxygen, and is new of ap-
plication. Try one bottle. Sold at 4s. 6d., 11s., and 22s., by Barclay, 95, Farring-
don-street. Order Dr. Hall's perchlorate of potassa.

THE HARDWARE WEEKLY MESSENGER.
CHARLES RYLAND AND SONS' IRON TRADE CIRCULAR
AND HARDWARE WEEKLY MESSENGER.

The "Iron Trade Circular" is eminently the business journal of the mining districts,
and complete, comprising not only the business news of the South and North
of England, but generally of the entire mining and manufacturing districts of
the Kingdom. It is now proposed to add a collection of special and general in-
formation in a department of the "Iron Trade Circular," under the head of
the "Mining Weekly Messenger." Subscription:—

One year (post free).....£2 2 0
Six months (post free).....1 10 0
Three months (post free).....0 10 0
Payable in advance.

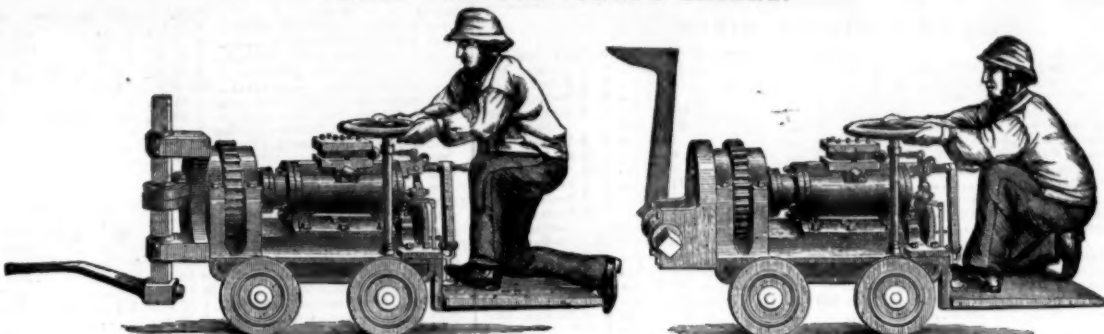
Advertisements and orders to be addressed Union-passage Birmingham.
CHARLES RYLAND AND SONS, Iron and Metal Brokers.

STOCKTON AND HARTLEPOOL MERCURY AND
GENERAL ADVERTISER (published at Hartlepool) is eminently the organ
of the mining and manufacturing districts of the South and North of
England, and is published weekly, with which it has been closely identified since
its first issue. It is the only one published more than once a week. Adver-
tisements to be forwarded to the publisher, Mr. JOHN H. BELL, Southgate, Hartlepool.

NEW MEDICAL GUIDE.
Dr. SMITH, who has had twenty years' practical experience in the
management of Delirium, Epilepsy, and other of the Nervous System, &c.,
has published a GUIDE (186 pages) for Self-Cure. Sent to any address on receipt of
3s. 6d. per volume.—Admission, 3s. 6d. and Co., 8, Burton-crescent, Euston-road, London.
Advertisements daily from Eleven to Five.

COAL CUTTING MACHINERY.

JAMES GRAFTON JONES'S PATENT.



Pick in position for hoeing.

Pick in position for vertical cut downwards.

Pick in position for vertical cut upwards.

Messrs. JONES and LEVICK, proprietors of this patent, are prepared to supply these Machines, which are on an improved principle, and are con-
structed to work the coal at any angle from the horizontal to the vertical, thus rendering them capable of "hoeing" at any angle, and of driving
"headings." They are simple and substantial in construction, and are not likely to get out of order. They are already successfully employed in
the Barnsley coal district, and are being introduced into the South Wales and other coal mining districts. They are also suitable for mining the
argillaceous ironstones of the coal measures, as well as working other mines and quarries.

N.B.—Air Compressing Machinery will be supplied, or plans and specifications furnished.

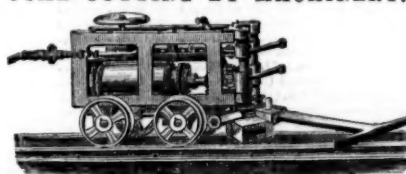
Applications to be made to Messrs. FREDERICK LEVICK and Co., 4, Charlotte-row, Mansion House, London; or Messrs. LEVICK and SIMPSON,
Blaina Ironworks, near Newport, Monmouthshire.

COAL CUTTING MACHINERY.—

THE WEST ARDSLEY COMPANY having, by recently patented improvements,
perfected their coal cutting machinery, worked by compressed air, are NOW READY
TO MAKE CONTRACTS FOR THE CONSTRUCTION AND USE OF THEIR MACHINES.
The results of twelve months' experience in the working of these machines, by the
West Ardsley Company, have proved most satisfactory, their use being found to
CHEAPEN THE COST AND IMPROVE THE AVERAGE SIZE OF THE COAL, TO LIGHTEN
THE LABOUR, and also TO MODIFY THE SANITARY CONDITION OF THE MINE.
All communications to be made to Messrs. FIETH, DOMESTHORPE, and BOWEN, No. 6,
Britannia-street, Leeds.

NOTICE.—THE WEST ARDSLEY COMPANY, having reason
to believe that their patents are being infringed upon, hereby give notice that
they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may
MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any
such INFRINGEMENT is MADE.

COAL CUTTING BY MACHINERY.



MESSRS. RIDLEY AND CO. have, by recently PATENTED
IMPROVEMENTS, COMPLETED their TRUNK COAL CUTTING MA-
CHINE, WORKED BY COMPRESSED AIR, and are NOW PREPARED TO NE-
GOCIATE FOR THE USE, and TO SUPPLY MACHINES, which will be found to
COMBINE SIMPLICITY OF CONSTRUCTION WITH PORTABILITY AND ECONOMY
IN WORKING. By the use of these machines a CONSIDERABLE SAVING OF COAL
IS EFFECTED, and the COST OF LABOUR MUCH REDUCED. Each machine will
be guaranteed as to its capabilities, &c.

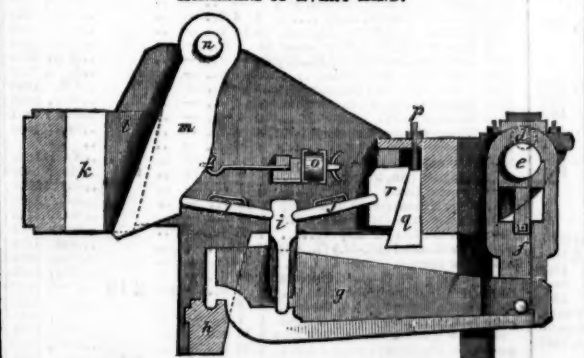
All applications to be made to Messrs. RIDLEY and Co., No. 11, South-street, Finsbury
London, E.C.; or Mr. FERRY BARKART, agent, 9, Clement's-lane, E.C.
* * * COLLIERY PROPRIETORS are CAUTIONED against PURCHASING or
USING MACHINES, the construction of which will constitute an INFRINGEMENT
OF THE ABOVE PATENT.

First Class Silver Medal, Royal Polytechnic Society,
Falmouth, 1864.

CRESSIE'S PNEUMATIC TUNNELLING ENGINE,
FOR SUPERSEDING THE SLOW AND EXPENSIVE USE OF MANUAL LABOUR
IN SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to
drive through any rock of average hardness at a minimum rate of 1 ft. per diem, and
to sink shafts at the rate of 2 ft. in three days.

Mr. CRESSIE will undertake contracts for sinking shafts, driving levels, &c., at an en-
ormous reduction of time and great saving in cost.
Applications to be addressed (for the present) to the patentee, Mr. E. S. CRESSIE
Tavistock Devon.

BLAKE'S PATENT STONE BREAKER,
OR ORE CRUSHING MACHINE,
FOR REDUCING TO SMALL FRAGMENTS ROCKS ORES, AND
MINERALS OF EVERY KIND.



It is rapidly making its way to all parts of the globe, being now in profitable use in
California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the
United States and England.

The above section illustrates Blake's Stone Breaker, just as made the last five years
and is fully protected in every part by patents.
Extract from Specification:—A short but powerful vibration is imparted to one or
both of the jaws by any convenient arrangement, and combination of powerful levers,
worked by a crank or eccentric on the main shaft.

LEGAL PROCEEDINGS will be taken at once against any person or persons found
making, using, or vending any machine, the construction of which will constitute an in-
fringement on the above patent. Read extracts of testimonials:—

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple
an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably
crushing the hardest stones and quartz. JOHN LANCHESTER.

*Our 15 by 7 in. machine has broken 4 tons of hard winstone in 20 minutes, for fine
road metal, free from dust. Messrs. OUD and MADDISON,
Stone and Lime Merchants, Darlington.*

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of
limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCHESTER.

Oreoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons
of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Fremont's Mines, California.—The 15 by 7 in. machine effects a saving of
the labour of about 50 men, or \$75 per day. The high estimation in which we hold
your invention is shown by the fact that Mr. Park has just ordered a third machine for
this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—
H. R. MARSDEN, SOHO FOUNDRY,
MEADON LANE, LEEDS.
Only maker in the United Kingdom.

International Exhibition, 1862—Prize Medal.



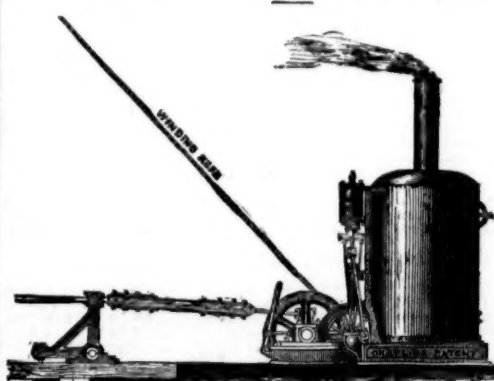
JAMES RUSSELL AND SONS
(the original patentees and first makers of wrought-iron
tubes), of the CROWN PATENT TUBE WORKS, WED-
NESBURY, STAFFORDSHIRE, have been AWARDED A
PRIZE MEDAL for the "good work" displayed in their
wrought-iron tubes and fittings.
Warehouse, 81, Upper Ground-street, London, S.

BICKFORD'S PATENT SAFETY-FUSE OBTAINED THE
PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTERNA-
TIONAL EXHIBITION of 1862, in London, and at the IMPERIAL EXPOSITION
held in Paris, in 1855.



BICKFORD, SMITH, AND CO.,
BUCKINGHAM, CORNWALL, MANUFACTURERS
OF PATENT SAFETY-FUSE, having been informed that the
name of their firm has been attached to fuse not of their ma-
nufacture, beg to call the attention of the trade and public to
the following announcement:—
EVERY COIL OF FUSE MANUFACTURED by them has
TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF GUNPOW-
DER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE
THREADS AS THEIR TRADE MARK.

Prize Medal—International Exhibition, 1862.



CHAPLIN'S PATENT PORTABLE

STEAM ENGINES, &c., for PUMPING AND WINDING.

These engines are SPECIALLY ADAPTED for PITS, QUARRIES
&c. They are EXCEEDINGLY SIMPLE in ARRANGEMENT, and
STRONG. NO FOUNDATION or CHIMNEY STALK BEING NE-
CESSARY, they can be ERECTED or REMOVED with VERY
LITTLE TROUBLE or EXPENSE, and are WELL ADAPTED FOR
HOME or FOREIGN USE.
Sizes, from 2 to 25 horse power.

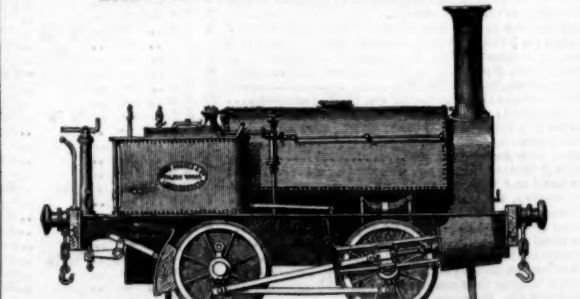
STEAM CRANES, STEAM WINCHES, CONTRACTORS'
LOCOMOTIVES, HOISTING ENGINES, PUMPING
AND WINDING GEARING, &c.

ALEXANDER CHAPLIN AND CO.,
CRANSTONHILL ENGINE WORKS, GLASGOW.

OFFICES,
9, ADAM STREET, ADELPHI, LONDON, W.C.

DEPOT,
LOWER FORE STREET, LAMBETH, S.
(Near the steamboat pier.)

HENRY HUGHES AND CO.,
FALCON RAILWAY PLANT WORKS,
LOUGHBOROUGH,
ENGINEERS, IRONFOUNDERS, BOILER MAKERS, and MANUFACTURERS of
EVERY DESCRIPTION of RAILWAY MACHINERY.



LOCOMOTIVE ENGINES, for MINERAL and CONTRACTORS' RAILWAYS, of
the best materials and workmanship, always in progress. These engines are designed
to supply the chief requisites in tank locomotives—viz., reduction of the overhanging
weight at the fire-box end, proper distribution of the weight upon the wheels, and keep-
ing the centre of gravity low. These are accomplished by making the fire-box and its
shell on an improved principle, which enables the driving axle to be placed further back
without interfering with the eccentrics and valve gear, which are of the usual simple
description. LONDON OFFICES, 34, CANNON STREET WEST.

